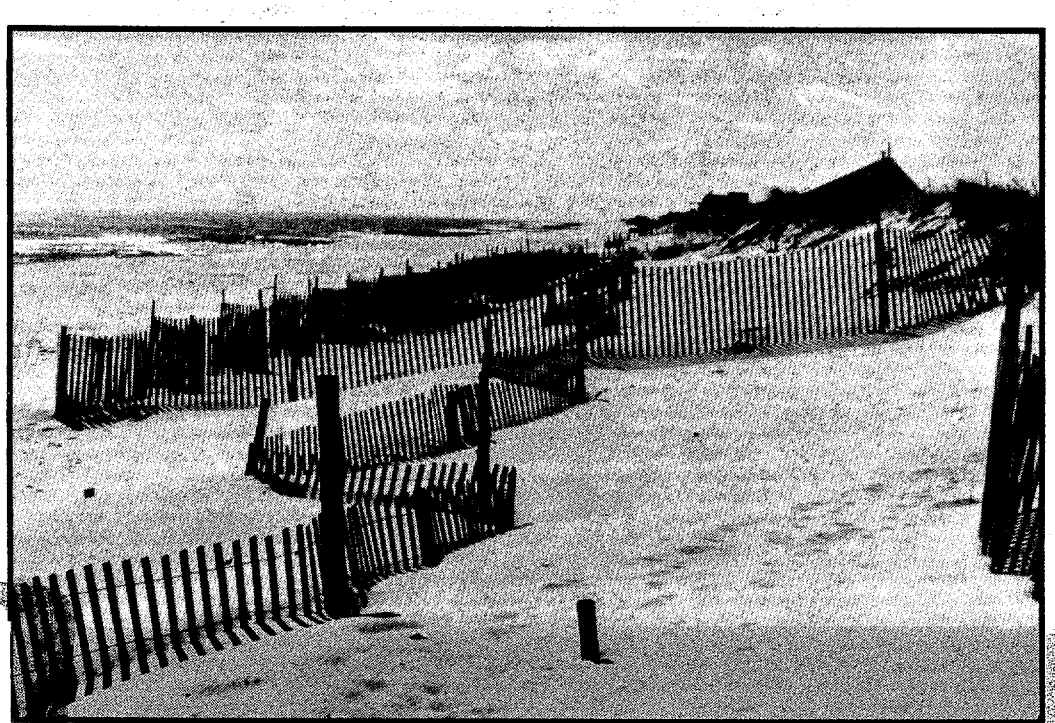
NEW JERSEY SHORE PROTECTION MASTER PLAN



STATE OF NEW JERSEY
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF COASTAL RESOURCES

OCTOBER 1981

VOLUME 3 - COMMENTS AND RESPONSES

NEW JERSEY SHORE PROTECTION MASTER PLAN

VOLUME 3

COMMENTS AND RESPONSES ON THE

DRAFT SHORE PROTECTION MASTER PLAN

OCTOBER 1981

State of New Jersey

Brendan Byrne
Governor

Department of Environmental Protection
Jerry Fitzgerald English
Commissioner

Division of Coastal Resources
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VOLUME 3

COMMENTS AND RESPONSES ON THE DRAFT SHORE PROTECTION MASTER PLAN

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CHAPTER I

INTRODUCTION

This volume presents the comments and responses regarding the Draft Shore Protection Master Plan (Dames & Moore, September 1980). The Department of Environmental Protection, Division of Coastal Resources (DEP/DCR) received comments from public agencies, interested groups, companies, and individuals both in writing and at two public hearings. The public hearings were conducted by the DEP on November 6, 1980 at the Convention Hall in Asbury Park and on November 7, 1980 at Stockton State College in Pomona.

The comments provided in this volume were excerpted from the transcripts of the two public hearings or from written letters received by the DEP. Verbatim transcripts on the public hearings, prepared by certified shorthand reporters, may be consulted at the DEP/DCR offices in Trenton or Toms River. All written correspondence regarding the Draft Master Plan document may also be reviewed at the DEP offices.

Comments on the Draft Master Plan were compiled and responses were prepared by the staff of both Dames & Moore and the DEP. A list of commentors and the origin of their comments is provided in Chapter II of this volume. Chapter III includes all comments and responses by topic. Comments were grouped into 11 general categories. A commentor is identified for each comment. Where appropriate, one response has been provided for duplicate or similar comments by different individuals or agencies. In the case of the comments on the proposed Dune and Shorefront Protection Act (A-1825), a general response was prepared in addition to the individual responses.

CHAPTER II

LIST OF COMMENTORS

A. State Government	Comment Origin and Date	
Commentor	Written	Public Hearing
John Paul Doyle State Assemblyman District 9		11/06/80
Richard A. Ginman, Director Division of Planning Department of Community Affairs	11/17/80	
Bruce Freeman NJDEP Division of Fish, Game, and Wildlife Marine Fisheries Administration	12/18/80	
Hazel Gluck State Assemblywoman District 9		11/06/80
Honorable James R. Hurley State Assemblyman, District 1 Millville, N.J.	11/13/80	
Brian Kennedy State Senator District 10		11/06/80
Stephen B. Richer N.J. Division of Travel & Tourism	12/15/80	
Alfred Scerni Director of District Office Operations For Congressman William J. Hughes		11/07/80
Dr. Anthony Villane State Assemblyman District 10		11/06/80

LIST OF COMMENTORS

B. Federal Agencies

Commentor	Comment Origin and Date: Written	Public Hearing
Paul A. Buckley Chief Scientist U.S. Department of Interior National Park Service, North Atlantic Region Boston, Mass.	10/22/80	
Plater T. Campbell State Conservationist U.S. Department of Agriculture Soil Conservation Service Somerset, N.J.	11/14/80	
Charles J. Kulp Field Supervisor U.S. Department of Interior Fish and Wildlife Service State College, Pa.	11/26/80	
William Matuszeski Deputy Assistant Administrator U.S. Department of Commerce NOAA/OCZM Washington, D.C.	11/06/80	
Barbara M. Metzger, Ph.D., Director USEPA Region II New York, N.Y.	11/11/80	
D.J. Sheridan, Chief, Planning/Engineering Division Department of the Army Corps of Engineers Philadelphia, Pa.	11/26/80	

LIST OF COMMENTORS

C. County and Municipal Agencies	Comment Origin and Date	
Commentor	Written	Public Hearing
Atlantic City Engineering Department Department of Public Works Atlantic City, N.J.	11/03/80	
Honorable Andrew J. Bedrarek Commissioner Sea Isle City, N.J.	11/07/80	
Leon S. Avakian Municipal Engineer Asbury Park, N.J.		11/06/80
Lloyd Behmke, Mayor Barnegat Light Borough, N.J.		11/07/80
Thomas W. Birdsall, P.E., President Birdsall, Gerkin & Dolan, P.A. Municipal Engineering & Planning Wall, N.J.	11/12/80	
William T. Birdsall, P.E. The Birdsall Corporation Belmar, N.J.	11/21/80	
Honorable Thomas Black, Mayor Borough of Sea Girt, N.J.	11/19/80	
Robert E. Bos, P.E. Cahn, Inc. City Engineer, City of Ventnor Voorhees, N.J.	12/01/80	
Leonard T. Connors, Jr. Freeholder - Director Ocean County Board of Chosen Freeholders Toms River, N.J.	11/19/80	
Stephen DePalma Schoor, DePalma & Gillen, Inc. Municipal Engineers for Sea Bright Matawan, N.J.		11/06/80
Steven Gabriel Department of Public Works City of Ocean City, N.J.	11/19/80	

LIST OF COMMENTORS

C. County and Municipal Agencies (Cont'd)	Comment Origin and Date	
Commentor	Written	Public Hearing
Charles Guhr, Mayor Wildwood Crest, N.J.		11/07/80
Robert Halsey Director of County Planning Monmouth County Planning Board Freehold, N.J.	11/18/80	
Michael Hyland Township Engineer Ocean City, N.J.	12/08/80	
Michael Ingram City Engineer Department of Public Works Atlantic City, N.J.	11/28/80	11/06/80, 11/07/80
Elwood Jarmer Planning Director Cape May County, N.J.		11/07/80
Robert LaTorre Publicity Director Borough of Seaside Heights, N.J.		11/06/80
David Magno Schoor, DePalma & Gillen, Inc. Municipal Engineers for Sea Bright Matawan, N.J.	11/17/80	
Jim Mancini, Mayor Long Beach Township, N.J.		11/07/80
Paul McCarthy Ocean City Administrator Ocean City, N.J.		11/07/80
F. Brent Neale, Mayor Monmouth Beach, N.J.		11/06/80
Robert Nissen, Mayor Ship Bottom, N.J.		11/07/80
Andrew Previti Municipal Engineers Sea Isle City/Ocean City, N.J.		11/07/80

LIST OF COMMENTORS

C. County and Municipal Agencies (Cont'd)	Comment Origin and Date	
Commentor	Written	Public Hearing
Francis A. Pyanoe, Mayor Borough of Belmar, N.J.	11/19/80	
Andrew Raffetto, Mayor Spring Lake, N.J.		11/06/80
Martin Vaccaro, Mayor Borough of Allenhurst, N.J.		11/06/80
J. Thomas Wood Borough Engineer Representing Atlantic City, Ventnor City Margate City, and Longport, N.J.	11/28/80	
James C. Wood, Mayor Stone Harbor, N.J.		11/06/80
Charles Worthington County Executive Atlantic City, N.J.	12/03/80	11/07/80

LIST OF COMMENTORS

D. Organizations and Universities

Commentor	Comment Origin and Date: Written	Comment Origin and Date: Public Hearing
John Carey Ocean City Coastal Conservation Committee Ocean City, N.J.		11/07/80
Alvin A. Clay, Dean College of Commerce and Finance Villanova University Villanova, Pa.	11/10/80	
Paul Dritsas American Littoral Society Sandy Hook, Highlands, N.J.	11/06/80	11/06/80
Marie Dugan Ocean City Environmental Association Ocean City, N.J.		11/07/80
Stewart C. Farrell, Ph.D. Associate Professor of Marine Geology Division of Natural Sciences Stockton State College Pomona, N.J.	11/19/80	
David Fisher New Jersey Builders Association Woodbridge, N.J.	11/21/80	
Ruth Fisher Cape May Citizens Group South Dennis, N.J.		11/07/80
Gary Grant Natural Resources Defense Council New York, N.Y.	11/12/80	
Dan Hain Avalon Environmental Commission Avalon, N.J.		11/07/80

LIST OF COMMENTORS

D. Organizations and Universities (Cont'd)	Comment Origin and Date	
Commentor	Written	Public Hearing
Robert Halsey New Jersey Coastal Counties Committee Freehold, N.J.		11/06/80
Stephen Leatherman, Director Environmental Institute University of Massachusetts Amherst, Ma.	11/03/80	
Winifred Meyer American Association of University Women Brant Beach, N.J.		11/07/80
Kathleen Rippere Natural Resource Chairman League of Women Voters Locust, N.J.	11/10/80	
Ken Smith Long Beach Island Chapter of the Citizens for Local and Intelligence Control		11/07/80
A. Jerome Walnut, President Conservation Society of Long Beach Island Barnegat Light, N.J.	11/17/80	

LIST OF COMMENTORS

E. Individuals

Commentor	Comment Origin and Date: Written	Comment Origin and Date: Public Hearing
Darryl N. Copeland Cherry Hill, N.J.	11/05/80	
John and Irene Jameson Sea Isle City, N.J.	12/06/80	
Loretta Hanley Sea Bright, N.J.	11/21/80	
Robert E. Hughey Robert E. Hughey Assoc. Margate, N.J.	11/18/80	
Philip F. Judyski Borough of Avalon Avalon, N.J.	11/03/80	
Barry Kamm City of Long Branch, N.J.		11/06/80
Dr. Andrew Lippi Somers Point, N.J.	11/13/80	11/07/80
Mary MacFarlane Sea Isle City, N.J.	11/15/80	
Eleanor McCrystal Ocean County, N.J.		11/06/80
Hugh McCullough Stone Harbor, N.J.	11/07/80	
Hilda Mixsell Stone Harbor, N.J.		11/07/80
Mary H. Owen West Long Branch, N.J.	11/20/80	
E.F. Pain Stone Harbor, N.J.	11/14/80	
Ross Pilling Mantoloking, N.J.	12/30/80, 12/03/80	

LIST OF COMMENTORS

E. Individuals (Cont'd)	Comment Origin and Date	
Commentor	Written	Public Hearing
H.M. Schroder Strathmere, N.J.		11/07/80
C.J. Suflas Melbourne Beach, Florida	12/17/80	
Re and Jo VanHolt Sea Bright, N.J.	11/12/80	

CHAPTER III

COMMENTS AND RESPONSES BY TOPIC

A. GENERAL COMMENTS

1.
COMMENT:
As a management tool, the Shore Protection Master Plan is complete and shows the attention given the history of the shore and the complex forces affecting it. The Plan is not only a research document but will be an invaluable guide in making policies that will protect and preserve this area. (William Matuszeski, Deputy Asst. Administrator, U.S. Dept. Commerce, NOAA/OCZM)

RESPONSE:
Thank you.

2.
COMMENT:
The massive scope of the true statewide need for shore protection reduces the effectiveness of the Master Plan to a minimal attempt at a solution. This is an unfortunate set of circumstances for certainly, on the surface, a Master Plan appears to be the singular viable tool for the basic problem statewide. Dames & Moore has done a creditable job in the preparation of this Master Plan, and I compliment those individuals responsible. (Leon Avakian, Municipal Engineer, Asbury Park)

RESPONSE:
Thank you.

3.
COMMENT:
The Federal Office of Coastal Zone Management gives it enthusiastic and unqualified support to the New Jersey Shore Protection Master Plan. The Plan is comprehensive and creates a solid foundation to guide long-term decisions on the use and future of the State's barrier islands. The Draft Master Plan is consistent with the recently expressed intent of Congress in passing the 1980 amendments to the Coastal Zone Management Act. These amendments encourage states to protect barrier islands, dunes, and beaches and to manage these natural resources so as to minimize the loss of life and property caused by improper development in erosion-prone or flood-prone areas.

While using accepted and tested methods, implementation of the Plan will place New Jersey in a position of leadership nationally as a state that has prepared for the results of storms and other national occurrences by assuring that public and private uses of the shore protect the ability of the resources to respond. (William Matuszeski, Deputy Asst. Administrator, U.S. Dept. Commerce, NOAA/OCZM)

RESPONSE:
Thank you for your supportive comments on the Draft Shore Protection Master Plan.

4.
COMMENT:
We believe this plan, if adopted, should be a dynamic plan. Provisions must be included to allow modifications, revisions, deletions, and additions as new programs and engineering developments become available. (Robert Bos, City Engineer, Ventnor)

RESPONSE:
Agreed. Programs presented in the Draft Master Plan were not intended to be inflexible. Prior to implementation of selected engineering projects, additional studies will be undertaken and final design specifications prepared. Also, induced physical and environmental changes will be monitored and appropriate actions will be taken after selected projects have been implemented. In general, revisions in reach engineering plans will be evaluated and implemented on a case-by-case basis under the State shore protection program, with consideration given to need, potential impacts, economic justification, and available funds.

5.
COMMENT:
It takes a combination of things to have the ultimate achieved. It takes some regulations; it takes some administration; it takes some acquisition; it takes some engineering; and it takes some of leaving Mother Nature alone to have the ultimate achieved. Maybe the proportions by which you suggest those various alternatives ought to be employed is incorrect. (John Doyle, Assemblyman, District 9)

RESPONSE:
Comment is noted.

6.
COMMENT:
We commend the New Jersey Department of Environmental Protection in its effort to develop this plan, and recommend that it be adopted by the state. (Charles Kulp, U.S. Department of the Interior)

RESPONSE:
Thank you for your supportive comments on the Draft Shore Protection Master Plan. We are heartened by your recognition of the proposed general approach to managing shoreline processes on our heavily developed coast.

7.
COMMENT:
I feel you should focus the plan on the short-term shore protection problem alone and quickly demonstrate that DEP can translate the voters' will as expressed in the bond issue vote into meaningful action. This may relieve some of the adverse public pressure and thereby enhance your long-term possibilities for achieving some land use regulations to go hand-in-hand with short-term, shore design attempts at maintaining a static shoreline. (Michael Hyland, Upper Township Engineer)

RESPONSE:
The DEP partially disagrees. Prior to preparation of the Shore Protection Master Plan, the State approach was a stop-gap, piecemeal approach. Reflecting recent scientific and engineering studies, DEP commissioned the consultant to analyze the erosion problems and prepare engineering programs on a reach-level. DEP feels that such an approach will minimize the potential for adverse physical and environmental impacts and ensure expenditure of limited shore protection funds in an equitable manner. The State's taxpayers should appreciate that approach.

8.
COMMENT:

The only positive thing I could say about the plan, very frankly, from my first review of it is that it establishes a priority list of projects. I think that is a step in the right direction because in my thirteen years in the Legislature, I have not seen that developed for shore protection, even though it is developed for every other form of capital expenditure in the State... (James R. Hurley, Assemblyman District 1)

RESPONSE:

Comment is noted.

9.
COMMENT:

In 1952, the State of New Jersey entered into a contract with the Federal Government. Guess what? It was to develop a Master Plan for erosion control in the State of New Jersey. It took 20-some years to put it together. In 1958, not three or four miles from here, the hearing on the master plan for the State of New Jersey erosion control was heard over there in Neptune. David Bardin said, when questioned early in 1974 about it, that he didn't think the State of New Jersey could afford it. We didn't need another master plan. (Anthony Villane, Assemblyman, District 10)

RESPONSE:

DEP disagrees. The Army Corps of Engineers' placed heavy emphasis on structural approaches to shore protection. More recent research by engineers and coastal geologists indicated that structural answers to these problems sometimes cause more problems than they solve. Based on these findings, DEP hired the consultants to use the reach concept to develop a series of effective, low-cost, mainly nonstructural, environmentally compatible alternatives to the Corps' plans. This is intended to provide a plan which will be of lasting value without duplicating past studies.

10.
COMMENT:

The city extends its congratulations to DEP, and to their fine consultants, Dames & Moore, for what we consider to be a reasonable planning document with acceptable compromises that deserve the conditional support recommendation for approval from our City.

There is a long-term and short-term program to address beach erosion problems. The long-term portion of it is within the realm of reasonable regulation. In the short-term, municipalities have critical beach erosion problems that have to be addressed and provisions are made in this Plan for these problems.

The proposed primary means of implementing long-term shoreline erosion measures is through the use of coastal regulation. This methodology will serve to reduce long-term erosion problems especially for the undeveloped barrier island regions. However, the plan also provides for additional elements that will address short-term and development-oriented beach erosion problems. This is a viable compromise that should be maintained intact within the plan. (Michael Ingram, Atlantic City, Engineering Dept.)

RESPONSE:

Comments are noted and appreciated.

11.
COMMENT:

What happened to the final and ultimate plan presented by Dames & Moore? They gave us a range of possibilities at that meeting (March 1980 Workshop). What happened to the last and final suggestion made by Dames & Moore? (Robert Latorre, Publicity Director, Seaside Heights)

RESPONSE:

As is the case with most major public planning documents, the Shore Protection Master Plan has been prepared in preliminary, draft, and final stages. At each stage, the Department took the working document prepared by Dames & Moore and made revisions. These revisions were made on the basis of public comments and the Department's own expertise. The final plan represents the culmination of this process.

Mr. Latorre appears to be referring to reach sand recycling schemes which were presented at the public workshop at Ocean County College on January 30, 1980. In the final analysis, considering the quantities of sand which would need to be recycled and the cost, plus the uncertainty of physical impacts on inlets that might result from interfering with littoral budgets, conventional renourishment was found to clearly be the preferred alternative. Details of the cost comparison for various beach nourishment schemes were provided for one reach, as an example, in Appendix F of the Draft Shore Protection Master Plan (see Volume 2, Chapter VIII of this document).

12.
COMMENT:

With this past storm, we have had water in the streets from bay sides. This problem has never been addressed in the Shore Protection Plan. (Mayor Charles Guhr, Wildwood Crest)

RESPONSE:

The purpose and scope of the Shore Protection Master Plan is to provide suitable approaches (engineering and land management) to the mitigation of shoreline erosion. Although proposed engineering shore erosion control measures include consideration of storm erosion protection, flood control or protection measures are not addressed explicitly. The controlling measures and long-term effects of flooding and erosion are substantially different.

With regard to the erosion problems on bay and backbay shores, a general program of shore protection work using low cost structural and nonstructural techniques is proposed with local projects selected based on case-by-case evaluations of feasibility. Approximately one-third of available monies for shore protection will be allocated for projects other than reach plans presented in the Master Plan. Some of these projects should help to alleviate local flooding problems on bay sides.

13.
COMMENT:

We vigorously protest the implementation of your stated Master Plan. It does not focus on the most precious of our national assets — the individual homeowner and taxpayer. (Re & Jo Van Holt, Sea Bright)

RESPONSE:

DEP disagrees. The entire focus of the State's shore protection effort is to obtain the most effective protection for the individual homeowner at the lowest possible cost to the taxpayer.

14.
COMMENT:

In general, the American Littoral Society supports the Draft Shore Protection Master Plan. We support the commitment to use non-structural alternatives, such as beach nourishment, dune stabilization, and land use regulation, as beach protection measures when consistent with the reach master plan. The proposed 50/50 state-municipal share of project costs is acceptable. (Paul Dritsas, American Littoral Society)

RESPONSE:

Thank you.

15.
COMMENT:

We feel that there is a long-term and short-term program to address beach erosion problems. We feel that the long-term portion of it is within the realm of reasonable regulation. We feel that in the short-term, we and other municipalities have critical beach erosion problems that have to be addressed, and we feel that provisions are made in this Plan for our problems (Michael Ingram, City Engineer, Atlantic City).

RESPONSE:

Comment is noted.

16.
COMMENT:

The Master Plan recommendations are unrealistic and unresponsive to the desires of the Legislature and the people of the State. It should have as its objective the restoration and preservation of the entire shoreline, not the abandonment of a major portion. (Mayor Martin Vaccaro, Allenhurst)

RESPONSE:

Comment is noted. Abandonment is not the objective of the New Jersey Shore Protection Master Plan.

17.
COMMENT:

I think the Draft Shore Protection Master Plan is more or less a blueprint of Dr. Psuty's report on the coastal dunes. The Plan is very one-sided. It only comes up with the solution of protecting our beachfront from nonstructural and non-engineering structural devices. (Mayor James G. Woods, Stone Harbor)

RESPONSE:

DEP disagrees. Although Dr. Psuty's work has been valuable, a closer inspection of both documents will show vast differences in subject matter. DEP also disagrees that the plan is one-sided. The mandate to the consultants was to develop a series of effective, low-cost, mainly nonstructural, environmentally compatible alternatives to the Corps of Engineer's plans. Structures were included in some alternatives where they were found to be cost beneficial as well as necessary for engineering reasons.

18.
COMMENT:

We note that this study was authorized by legislation enacted in 1978 and it has taken two years to complete the study. (David Fisher, N.J. Builders Association)

RESPONSE:

Comment is noted.

19.
COMMENT:

When dealing with planning for the future, there will always be resistance to changes and this is natural. I believe, however, that too strong an effort is being made by present administrative personnel at the state and federal levels to create drastic regulatory change in opposition to true public need and sentiment. It often appears that the public servant is telling the public what is best for its interest, much the way Mother and Daddy do with the youngster. This process seems to underline the very document we are discussing. (Leon Avakian, Municipal Engineer, Asbury Park)

RESPONSE:

The State is undertaking this study at the express direction of the Legislature, and is acting on the basis of a wide variety of needs and sentiments, as expressed by diverse elements of the public. This Plan does not create "regulatory change," but rather provides a framework to better use existing regulatory and funding programs.

20.
COMMENT:

In Chapter VI, there are not specific descriptions of the impacts of the recommended plan. We suggest that there should be a municipal level analysis of such impacts as: projected costs of engineering alternatives; existing taxes lost; prospective development revenues lost; jobs lost; housing relocation costs; engineering and maintenance costs; number of persons affected positively or negatively by the alternative; etc. (Richard A Ginman, Department of Community Affairs)

RESPONSE:

The Draft Master Plan does include estimates of costs and benefits for alternative reach engineering plans. These estimates are presented as reach totals rather than broken down by municipality. In Chapter V of the Draft Shore Protection Master Plan (see Volume 2, Chapter V of this document) a detailed discussion of potential quantifiable and nonquantifiable socioeconomic benefits and impacts are provided for four representative reaches and a generic discussion is provided for the remaining reaches. A generic discussion of ecosystem and biological resource impacts of engineering alternatives is also provided in Chapter V. During reach specific studies prior to implementation of selected priority engineering, the DEP will assess specific municipal impacts as well as prepare final engineering design plans and specifications.

21.
COMMENT:

The presentation is not a positive one. It builds a case for regulation, but the emphasis should be one of substituting positive long range planning for the current policy (excluding CAFRA, of course) of post erosion/storm reaction. The format is very cumbersome and academic. It is virtually impossible to wade through to the substance of the study. The executive summary simply does not accomplish its purpose.

I would suggest a total rewrite of the executive summary with a series of charts and the inclusion of much of the information contained in Chapter V. The summary section should be followed directly by Chapter VI – specific recommendations. If both of these sections are moved to the front of the book, those tempted to wade further will do so with a purpose. Their task can be made easier by indexing the study's base data. (Robert Hughey, Robert E. Hughey Associates)

RESPONSE:

To improve on the presentation, the final Master Plan document is presented in a three volume format. The original executive summary has been dropped in favor of a summary volume (Volume 1) which includes much of the important information contained in Draft Shore Protection Master Plan Chapters V and VI. The remaining information is contained in the new Volume 2 – Basis and Background.

22.
COMMENT:

On Draft Shore Protection Master Plan page I-3, article B, "Purpose and Scope of Shore Protection Master Plan," it was stated that the Master Plan reviewed earlier shore protection plans and studies. I question at what level did it review the plans and studies? As a practicing professional engineer in the State of New Jersey, and serving as municipal engineer in three shore front communities, I know that I was never approached regarding any existing plans or studies for the towns which I am engineer. Futhermore, my firm has built many of the shore protection structures along the Monmouth County coast and we have never been approached regarding existing plans or studies for any of these communities.

Under the same heading, it is stated that the Master Plan provides a comprehensive shore protection plan which is consistent with State coastal management policies and objectives. I question what are the objectives and policies, whose are they, and when were they established. (William T. Birdsall, Birdsall Corporation)

RESPONSE:

During the initial phase of the Master Plan study, the consultant made a detailed review of pertinent literature and data on file with the Philadelphia District Army Corps of Engineers, the State Bureau of Coastal Engineering, and the U.S. Army Coastal Engineering Research Center. Field reconnaissance activities included a helicopter overflight of the coast on January 26, 1979 and on-the-ground inspections during the period of January through March 1979. All developed areas of the New Jersey Atlantic Coast as well as the Delaware and Raritan Bay shoreline were covered. Vertical aerial photographs of the New Jersey Atlantic coast, taken annually or biannually between 1949 and 1978 (excluding years 1972 through 1976), and various miscellaneous oblique aerial and ground-level photographs, taken during the field reconnaissance described above, served as the primary tool for analyses. Workshop discussions with coastal engineers and planners were held at Stockton College on March 20, 1979. During this workshop, input on site specific erosion problems and concerns were obtained through dialogue with the municipal and county representatives, the State, and the U.S. Army Corps of Engineers. Also, outside consultants were employed to provide input during the initial and review phases of the study.

State coastal management policies and objectives are explicitly stated in the New Jersey Coastal Management Program (NJDEP/NOAA, August 1980) and can be found in the New Jersey Administrative Code at NJAC 7:7E-1.1 et seq. The policies were developed over six years of coastal management and planning with the U.S. Department of Commerce, National Oceanic and Atmospheric Administration, Office of Coastal Zone Management, and with extensive public participation. Federal approval of bay and ocean shore policies came in September 1978.

23.
COMMENT:

One potential problem that I feel is neglected is the effect of offshore dredging on finfishing. Both recreational and commercial fishermen direct their activities on the various offshore "lumps" which are sand ridges. Since these "lumps" are usually good material for beach nourishment there is a tendency to recommend dredging them. If you remove the ridges you remove the swales and therefore the attraction for finfish.

This issue will have to be resolved before utilizing any of the offshore borrow areas. Perhaps one or both of the more expensive alternative, sand bypassing or sand recycling, will have to be used. (Bruce Freeman, Marine Fisheries Administration)

RESPONSE:

As discussed in Section V.B.3 (Impacts on the Natural Ecosystem and Resources) in the Draft Master Plan (see Volume 2, Section V.B.1 of this document), dredging of offshore sources is expected to result in short-term localized impacts such as habitat disturbance, water quality degradation, and increased turbidity. Adverse impacts on productive shellfish beds can be minimized by avoiding these areas. The water quality and turbidity effects are expected to be small and of very short duration since fine-grained sediments (silts and clays) are not to be dredged for use in beach nourishment. Dredging of fine-grained materials would tend to result in more significant turbidity and water quality effects due to the tendency of these materials to be resuspended. Prior to implementation of engineering programs, borrow source grain size information and associated dredge-related impacts will be more closely assessed during reach specific, preconstruction design studies.

With respect to effects on finfish through disturbance of offshore ridges and swales, again, the impact of dredging is expected to be small. Typically the sand ridges contain large quantities of sand suitable to beach nourishment. However, over the 50-year planning period, removal of entire ridges is not anticipated. The extent of any effect, in terms of the alteration of the integrity of the ridges and swales as attractive habitats for finfish, will probably depend on the total quantity of material removed. This effect would be best evaluated through a program of monitoring.

24.
COMMENT:

It certainly is your duty to prevent us from being foolish, but there is no convincing evidence that an orderly retreat from the advancing "Active Zone" will not give us many more years of occupation of the beachfront. We need to be told: 1) The projected position of the Active Zone – maybe revised every 25 years or after any major storm; 2) Effective dune protection and dune building programs; 3) Design of pedestrian walkways and walkthroughs – possibly 3 types of different severity of use; 4) Design of ramps for passage over the dunes of vehicles; 5) Design and proper placement of dune platforms; 6) Maximum acceptable damage to dunes before municipal authority should step in and take corrective action at the homeowner's expense. In short, a guide for the preparation of local dune ordinances and for the proper activities of the local dune inspectors. (Ross Pilling, Mantoloking)

RESPONSE:

This is an excellent suggestion, and is being undertaken by the DEP independently. The predicted landward migration of the erosion hazard area varies along the coast of New Jersey. As discussed in Draft Master Plan Appendix I, Section 4, (see Volume 2, Section X.C of this document) considering available erosion rate data, nowhere is this "active zone" or "erosion hazard area" expected to extend more than 600 feet inland from the existing shoreline during the next 50 years. At some locations, developed shorefront areas are being threatened now by erosion. These areas were classified as critical erosion areas in Appendix A of the Draft Shore Protection Master Plan. Other locations, classified as moderate erosion or non-eroding areas, may not be effected by erosion during the 50-year planning period used in the Master Plan.

However, one must look beyond the long-term erosion trends in assessing the threat to developed shorefront areas. As shore residents have learned repeatedly over the years, the occasional destructive storm can result in erosion and property destruction well inland of the existing beach and dune areas. During the March 1962 northeaster storm, large areas of Long Beach Island and Ludlam Island were overwashed. In 1980 dollars, damages exceeded $300 million. Thus, delineating hazard areas or "active zone" utilizing erosion projections for the purposes of regulating future development is in effect the minimum area that will be threatened during the planning period. As recommended in the Draft Master Plan, any delineated shorefront regulatory zone should be reassessed approximately every 5 years to adjust for variation in shoreline long-term erosion trends.

Regarding dune management techniques and dune ordinances on a local level, under the State's ongoing Shore Protection Program, the DEP, Division of Coastal Resources has and will continue to raise public awareness and provide technical assistance to coastal residents, developers, and local governments. An expanded discussion of various land regulation approaches, including dune management, is provided in Volume 1, Section II.C of this document.

25.
COMMENT:

A book put out by Rutgers, the Center for Coastal Environmental Studies, is all about natural gas pipelines. This is not about protecting our dunes. This is taking over our land to put in natural gas. (Eleanor McCrystal, Ocean County)

RESPONSE:

This comment refers to the CCES study entitled OCS Natural Gas Pipelines: An Analysis of Routing Issues (1980). That study has no relationship to the New Jersey Shore Protection Master Plan.

26.
COMMENT:

The report fails to recognize the work the the Soil Conservation Districts and the Soil Conservation Service have done in dune stabilization. After a severe coastal storm in 1975, and after Hurricane Belle in 1976, the Cape-Atlantic Soil Conservation District and the Soil Conservation Service assisted several communities in Cape May and Atlantic Counties with technical and financial assistance to install sand fencing and revegetate severely eroded dune areas. This work was carried out under the USDA's Emergency Watershed Protection Program.

The Cape-Atlantic Soil Conservation District, has also assisted many other municipalities through the 4-H Green Dike program. The Soil Conservation Service provides technical and financial assistance for coastal erosion protection and dune stabilization under the Resource Conservation and Development (RC&D) Program. The Soil Conservation Service operates a Plant Materials Center at Cape May Courthouse. Plant materials are assembled and evaluated for effectiveness in combating erosion problems.

We agree with the plan in that more erosion control decisions must include mitigation measures such as management of coastal zones and nonstructural measures which include sand fencing and vegetative plantings. The Districts, other agencies, and organizations that have been advocating this approach should be recognized. (Plater T. Campbell, Soil Conservation Service)

RESPONSE:

Appropriate changes have been made in the Shore Protection Master Plan in recognition of Soil Conservation Service technical and financial assistance for shore erosion protection and dune stabilization.

27.
COMMENT:

The Division concurs with the recommendation of the plan calling for the "use of coastal land managment and selected acquisition as long-term shore protection measures." In many instances, however, short-term engineering structures and beach nourishment projects should be maintained until their cost-benefit aspects can be evaluated and sufficient funds are allocated for land acquisition and management. Only then should existing measures be phased out or modified under a shore wide master plan. (Steve Richer, N.J. Division of Travel & Tourism)

RESPONSE:

The findings of the Shore Protection Master Plan Study shows that non-structural engineering projects, which are clearly beneficial, can provide a level of short-term protection until land management schemes and relocation incentives become effective. The study finds that engineering protection projects in certain areas are not cost effective. In the Final Master Plan the DEP makes committment to continued engineering shore protection programs in the future in line with this comment (Volume 1).

28.
COMMENT:

The plan attempts to combine hazard mitigation and resource protection into one regulatory and engineering program. It is completely unrealistic to believe that what would be good in undeveloped coastal areas would also be workable along most of the developed shoreline of New Jersey. (Alfred Scerni, Director of District Office Operations for Congressmen William T. Hughes)

RESPONSE:

We disagree that it is unrealistic to combine hazard mitigation and resource protection into one program. The proposed regulated zone would include existing beaches and dunes as a minimum and would address the protection of these valuable resources. Their value is related to the protection they provide to shoreward areas from storm action as well as their ecological value.

Consideration of hazard mitigation in the form of erosion setbacks, as recommended in the Draft Master Plan, or as other delineation schemes, would also involve the narrow frontal portion of the shoreline and may include the beach and dune areas. If hazard considerations so indicate, the regulated zone would go beyond the dunes by the required amount. Where the hazard area falls within or short of the dune area, resource protection considerations would apply and dune areas would represent the landward boundary of the regulated zone. Both of these considerations are addressed in this narrow (about 300 feet) frontal shoreline zone on developed as well as undeveloped coastal areas. The DEP has already embodied resource protection concepts for dune and beach areas of the State in the Coastal Management Program for New Jersey. The importance of hazard mitigation zoning is even more important in New Jersey because of the developed nature of its shoreline.

29.
COMMENTS:

The Master Plan classifies portions of each reach as to vulnerability to erosion. Category 1 is critical erosion; Category 2 is significant erosion; Category 3 is moderate erosion; and Category 4 is non-eroding. This factor does not enter into any of the calculation used in the selection of the priority reaches. (Mayor Martin Vaccaro, Borough of Allenhurst)

I commend the division of the shorefront areas into Reaches; categories of erosion with various suggested protection plans. But why were priorities not set for critical areas? (Loretta Hanley, Sea Bright)

RESPONSE:

The severity of the erosion problem in each reach is taken into account in the benefit/cost based prioritization of Master Plan alternative reach engineering programs. Although the erosion severity categories presented in the Draft Master Plan are not directly input to the priority analysis, they are considered in the assessment of shore protection requirements and derived benefits for the various alternatives evaluated.

For example, where a reach is severely eroded, there a greater "need" for a protective beach. In the Master Plan design process, the "need" is a function of the width of the existing beach, the anticipated short-term storm erosion events, and long-term erosion rates. Where a protective beach is provided along a critically eroding area, higher property protection benefits can be taken than for an area which already has an adequate protection beach. No property protection benefits are taken for adding beach to an area that already has a wide, protective beach.

In other words, the property protection benefits increase with increased need for protection. However, since the Master Plan benefit/cost analysis also includes benefits and costs other than these related directly to shore protection for property protection (beaches are also provided for recreational benefits), the benefit/cost priority ranking of Master Plan alternatives is not the same as the relative severity of erosion.

30.
COMMENT:

Errors exist in several of the tables listed in Appendix B of the Draft Master Plan. Table B-3 neglects to list the summer flounder or fluke (Paralichthyes dentatus) as a common estuarine fish of New Jersey and incorrectly refers to the toadfish (Opsanus tau) as a recreational fish. Table B-10 fails to indicate black skimmer nesting locations on the beach at Sandy Hook (reach 3) and Stone Harbor Point (reach 12). Because of the migratory nature of many shorebird species this list should include potential nesting sites as well as present ones. (Paul Dritsas, American Littoral Society)

RESPONSE:

Appropriate corrections have been incorporated in Volume 2, Chapter II of this document.

31.
COMMENT:

The Ocean City Environmental Association strongly recommends state acquisition of undeveloped beach land, non-structural protection, relocation, rather than rebuilding with fair compensation, beach nourishment resulting from rebuilding the great sand dune, nature's own barrier, and start where we are now. The damage that is done is irreversible. Let us keep what we have, let home owners be personally responsible for their rebuilding, and let us not permit any development on our beaches and dunes from here on in. (Marie Dugan, Ocean City Environmental Association)

RESPONSE:

Comments are noted.

32.
COMMENT:

On Draft Master Plan page IV-1, in paragraph #3 reference is made to the "hidden costs associated with intensive development of shorefront areas..." Should there be a brief rundown of those hidden costs since many have argued for the "hidden benefits" deriving from intensive development of shorefront area? (Steve Gabriel, Department of Public Works, Ocean City, N.J.)

RESPONSE:

The referenced "hidden costs" are those associated with subsidized flood insurance, disaster relief, and shore protection along developed coastal high hazard areas.

33.
COMMENT:

We were led to believe that when the bond issue in 1977 passed, $20 million would be used for beach nourishment and protective structures, a master plan would be made so that one town would not put in something that would be detrimental to another town and this master plan totally would be in the categories of engineering, nourishment, protection. (Mayor James Mancini, Long Beach Twp.)

RESPONSE:

This is precisely the purpose of the plan.

34.
COMMENT:

The plan's recommendation should reaffirm support for the protection of existing wetlands, restating their important function in providing erosion protection. (Barbara Metzger, U.S. EPA, Region II)

RESPONSE:

Agreed. Wetlands play an important part in controlling shoreline erosion, especially along the shores of bays, backbay areas, and tidal waterways. A statement to this effect has been included in the Final Master Plan document.

35.
COMMENT:

I would urge you to use your talents and efforts in a direction other than trying to vacate barrier islands. Redouble your efforts and create a partnership, the kind of partnership that we thought we had over many, many years between local municipalities, counties and the State of New Jersey. (James Hurley, Assemblyman, District 1)

RESPONSE:

The DEP does not advocate the abandonment of or gradual retreat from developed barrier islands. Recognizing the resource value, the dynamic nature, and degree of development of New Jersey's barrier islands, the Shore Protection Master Plan components have been proposed to reduce property losses and other related threats to public welfare and safety. Recommendations are provided for land use regulation and/or post-storm acquisition of a narrow strip of shore land including the existing beach and dune areas, at a minimum; plus areas subject to erosion during the 50-year planning period. The continuance of the State's coastal engineering programs is also an important part of the Master Plan.

It is important to note that the Master Plan does not propose implementation of land use regulation or land acquisition to the exclusion of alternative engineering programs, or the reverse. Rather it calls for implementation of all of the component programs, plus modification of certain conflicting Federal programs, to reduce erosion losses suffered with the passage of time and the occurrence of destructive storms.

36.
COMMENT:

I felt that the short section on Dune Stabilization (Draft Master Plan Chapter IV, 20-21) was inadequate. The authors have presented Dolan's old argument that quartz sand grains can be ground down to dust due to dune interference. Analysis of this statement is needed since it violates many of the known physical principles. I would suggest that the authors read the following papers: Sedimentary Geology, 1979, v. 24, p. 1-16, and Q.J. Engr. Geol., 1979, v. 12, p. 281-290. (Stephen Leatherman, Environmental Institute, University of Massachusetts)

RESPONSE:

Cited references have been reviewed and appropriate changes have been incorporated in the final document. When the funded projects move into the detailed design phase, DEP will insure that dune stabilization techniques used will reflect the latest and most effective techniques.

B. LEGISLATIVE AUTHORITY

37.
COMMENT:
What role do you foresee for the legislature in establishing public policy along the shore? (Assemblywoman Hazel Gluck, District 9)

RESPONSE:
The legislature has indicated a general policy favoring cost-effective shore protection. The DEP undertakes its coastal policy making in a very open manner, and will always solicit the views and guidance of the Legislature.

38.
COMMENT:
Any coastal regulatory program should be in close consultation with and have input from coastal communities. Such a regulatory program should be accomplished by enabling legislation, giving the first option to local government with reasonable guidelines. This is appropriately proposed in the Master Plan. (Robert Halsey, Planning Director, Monmouth County)

RESPONSE:
Thank you. The DEP intends to work closely with coastal communities in developing regulatory programs.

39.
COMMENTS:
I want you to tell me why bonds were spent on it (the Draft Master Plan) if it were not specifically requested in the appropriate bill. What is the legislative authorization for the Shore Protection Master Plan?
If bond money was used to pay for this consultant's report, where was this authorized? (Assemblyman James Hurley, District 1, Assemblywoman Hazel Gluck, District 9)

RESPONSE:
Section 5 of the 1979 appropriations bill (P.L. 1978, C. 157) specifically called for the preparation of a 5-year plan.

40.
COMMENT:
What happened to the 90-day, 5-year capital plan called for in P.L. 1978, Chapter 157? (Assemblywoman Hazel Gluck, District 9)

RESPONSE:
P.L. 1978, Ch. 157 required that within 90 days of the Act's effective date the Department "is directed to prepare a comprehensive beach protection plan for a 5-year capital program for beach protection facilities, projects and programs." The actual task has taken much longer, due to the complexity of the issues involved and the fact that a comprehensive plan like this has never been prepared before.

41.
COMMENT:
Any rules and regulations proposed pursuant to the recommendations of the Draft Plan must only be adopted by the NJ DEP following legislative authorization and oversight. (Leonard T. Connors, Jr., Ocean County Freeholder Director)

RESPONSE:
The shore protection legislation does not provide for this, nor does the New Jersey Administrative Procedure Act. All State agency rulemaking is subject to the oversight provisions of the Administrative Procedures Act.

42.
COMMENT:
We are especially critical considering that the regulatory measures advocated by the Draft Plan have not been authorized by the Legislature. (Leonald T. Connors, Jr., Ocean County Freeholder Director)

RESPONSE:
It should be noted that the Draft plan is only a study, and the regulatory measures it advocates are only recommended options for long-term shoreline management. DEP will use the Plan to make decisions; these are decisions it must make regardless of whether a comprehensive plan exists.

C. PUBLIC PARTICIPATION

43.
COMMENT:
We were told we would have input into the revised dune plan. We were ignored entirely. (Mayor Behmke, Barnegat Light)

RESPONSE:
We disagree. The development of the Shore Protection Master Plan has been very public, and all public comments have been considered. All comments have been responded to, and many changes have been a result of the public input.

44.
COMMENT:
The Coastal Counties Committee requests a meeting with the New Jersey Department of Environmental Protection to examine the details of any proposed regulatory programs and model ordinances or regulations. (Robert Halsey, Director of Monmouth County Planning Board)

RESPONSE:
Comment is noted. The participation of all local governments will be essential to this process.

45.
COMMENTS:
Since certain portions of County revenues are related directly to the protection and recreational benefits of these projects, it is recommended that County participation be considered as part of the Master Plan. (J. Thomas Wood, Borough Engineer, Egg Harbor)
No mention is made in the report of County participation in the beach erosion program. (Michael Ingram, Atlantic City Engineering Department)
County participation and their funding should also be secured as part of the Master Plan. (Michael Ingram, City Engineer, Atlantic City)

RESPONSE:
Historically, New Jersey shore protection projects have been a cooperative venture with State, Federal, and local cost sharing. Local funds have come from municipal and county sources. Approximately $49 million in State, Federal, municipality and county funds were spent in eight counties between 1959 and 1974. As indicated in Tables 1 and 2, of the total expenditures for shore protection during this period, 20 percent was funded by the Federal government, 48 percent by the State, 31 percent by municipalities, and only 1 percent by counties. Only Monmouth and Ocean Counties participated in cost sharing during the period 1959 through 1974. Despite the low level of county participation to date, the DEP intends to continue to solicit cost sharing for shore protection from county sources.

46.
COMMENT:
There should be a continuing dialogue between interested persons, your consultants, and the Department with respect to this extremely important document. (David Fisher, N.J. Builders Association; Leonard T. Connors, Jr., Ocean County Freeholder Director)

RESPONSE:
Agreed.

47.
COMMENT:
There was insufficient time to review the document. (Charles Worthington, Atlantic County Administrator; David Fisher, N.J. Builders Association; Leonard T. Connors Jr., Ocean County Freeholder Director)

RESPONSE:
We disagree. Public comments were accepted by DEP long after the hearings were held.

TABLE 1

SHORE PROTECTION IN NEW JERSEY
FISCAL YEAR EXPENDITURES 1959-1974
(Dollars)

Fiscal Year	Total	Federal	State	County	Municipality
1959	2,620,257	—	1,430,778	90,182	1,099,297
1960	1,041,813	—	658,471	51,928	331,414
1961	995,709	—	547,729	28,789	419,191
1962	1,302,035	—	697,724	000	604,311
1963	14,767,133	7,323,215	3,869,770	—	3,574,148
1964	6,574,109	2,436,052	2,021,217	519,533	1,597,307
1965	2,125,291	461,252	932,433	2,228	729,378
1966	3,363,086	—	1,872,496	41,983	1,448,607
1967	3,128,859	85,533	1,861,731	14,793	1,166,802
1968	3,376,216	900,482	1,294,708	—	1,181,026
1969	2,294,058	—	1,688,726	8,532	596,800
1970	2,064,389	285,851	1,342,854	59,306	376,378
1971	1,585,137	—	1,253,530	—	331,607
1972	1,574,273	—	1,250,700	30,000	293,573
1973	150,464	—	114,312	—	36,152
1974	2,175,166	—	1,631,375	—	543,791
1975	1,691,030	—	1,233,660	—	467,370
1976	1,738,162	—	935,737	—	802,425
1977	42,085	—	42,085	—	—
1978	1,385,760	—	766,282	—	619,478
1979	1,467,315	—	733,656	—	733,659
1980	1,347,733	—	914,794	—	432,939
Totals	$ 56,810,080	$ 11,492,385	$ 27,084,768	$ 847,274	$ 17,385,653
	100%	20%	48%	1%	31%

Note the heavy shore protection expenditures in 1963 and 1964 attributed to restoration after the March 1962 storm.

Source: Prepared by NJDEP, Bureau of Coastal Engineering, 1981

TABLE 2

FISCAL YEAR EXPENDITURE FOR SHORE PROTECTION IN NEW JERSEY
1959 - 1974

Breakdown By Funding Source and County
(Dollars and Percent of Total)

County	Total	State		County		Municipality		Federal	
		(dollars)	(percent)	(dollars)	(percent)	(dollars)	(percent)	(dollars)	(percent)
Atlantic	$6,472,498	$2,978,122	46	0	0	$2,527,315	39	$ 967,061	15
Burlington	52,235	50,515	97	0	0	1,720	3	0	0
Cape May	19,918,866	9,987,818	50	0	0	5,765,485	29	4,165,563	21
Cumberland	93,104	69,828	75	0	0	23,276	25	0	0
Middlesex	705,681	355,084	50	0	0	350,597	0	0	50
Monmouth	16,584,552	8,213,642	50	813,444	5	4,695,707	28	2,861,759	17
Ocean	11,345,714	4,375,356	39	33,830	0	3,438,527	30	3,498,002	31
Salem	1,621,185	1,038,159	64	0	0	583,026	36	0	0
More than One County	16,245	16,245	100	0	0	0	0	0	0
TOTALS	$56,810,080	$27,084,768	48	$ 847,274	1	$17,385,653	31	$11,492,385	20

Source: Prepared by NJDEP, Bureau of Coastal Engineering.

D. BEACH ACCESS

48.
COMMENTS:
"Acquisition would also provide increased levels of public access and natural recreational opportunities." How? Why is it that the DEP feels it can provide better access than we can? (Robert Latorre, Publicity Director, Seaside Hts.)

On page ES-3 of the Draft Master Plan, under the article "Findings," the last finding, I question how the undeveloped access areas which are obtained by the State are to be maintained and how will they provide increase levels of public access and natural recreational opportunities. (William T. Birdsall, Birdsall Corporation)

RESPONSE:
Many coastal communities provide adequate public access to beaches; others provide no access for bathers and fishermen. The State's authority to promote public access through regulatory actions is contained in four fundamental coastal laws: CAFRA, the Wetlands Act, the Waterfront Development Law, and the Tideland Statutes. Various Coastal Management Program policies which are used in the administration of these laws pertain to shorefront access. As it has in the past, the DEP intends to utilize its various capital programs, such as Green Acres, to acquire new open space shorefront recreational areas, improve public access to the shorefront, and discourage practices which limit access.

49.
COMMENT:
You have not discussed the problem of providing beach access to the public under the provisions for overwash areas where redevelopment would be regulated. (Kathleen Rippere, League of Women Voters)

RESPONSE:
The Department's Rules on Coastal Resources and Development Policies (NJAC 7:7E -1.1 et seq.) call for maximization of beach access wherever it is practical. This policy would apply to all bond use decisions.

50.
COMMENT:
In most cases, the ends of the streets, which provide public access to the beach, are at right angles to it, allowing in storms or very high tides, a wide path directly landward. If, instead, a path from the end of the street were to be formed by two parallel lines of fencing about five to six feet apart running in a southerly-oriented direction approaching the beach, there would be no direct access for water to the road, erosion by the northeasters would be discouraged, and dune buildup encouraged. (Winifred Meyer, American Association of University Women)

RESPONSE:
Agreed. This practice has been successful for various coastal communities, including Wildwood, to minimize storm washover through dune access ways. An alternative approach is to leave the dune line intact and construct wooden walkover structures to provide access over the dune to the beach. This approach also helps reduce dune destruction from pedestrian traffic.

Where DEP implements a reach alternative that includes enhancement and maintenance of dunes, the access way path to the ocean will be readjusted in a more southeasterly (or southerly) direction depending on the orientation of the individual beaches of each reach. The width of the path should probably be no more than four feet.

51.
COMMENT:
Another supposed goal of these land management techniques is to increase public access to the State's beaches. However, there is absolutely no analysis of how much public access is currently available and how much more, if any, is necessary.
Public access must not be provided for at every single point on the beach. So long as there is sufficient public access to accommodate public need, no further public access may be necessary. We feel the discussion of this program is inadequate. (David Fisher, N.J. Builders Association)

RESPONSE:
Available data regarding beach access was provided in Chapter I of the Draft Shore Protection Master Plan (see Volume 2, Section II.C of this document). Beach use demand data for each reach are discussed in Volume 2, Chapter VI. For recreational beach development engineering designs, existing and projected demand data were utilized to evaluate beach area requirements throughout the planning period.
A 1977 study entitled Public Access to Oceanfront Beaches, (by the New Jersey Beach Access Study Commission) estimate that 95 percent of the publicly owned ocean beach frontage and 55 percent of private frontage is available for public use. The DEP public access policies do not call for mandatory public access, but for access where feasible and appropriate. DEP is, however, currently engaged in a separate more detailed evaluation of available access points in each oceanfront community. This information will form the basis for identifying public access adequacy and needs for each of the oceanfront reaches.

52.
COMMENT:
Public access seems to me to be an entirely different problem from preserving beaches and dunes. The Public Advocate is working on public access — as he should be. Public access involves a great deal more than just allowing people on the beaches. It includes the massive infrastructure needed to make public access viable — roads, bath houses, toilets, food service and public safety in the form of life guards and police. In fact, I believe that unlimited access to dunes and beaches is an ecological disaster — you certainly don't permit unlimited access at Island Beach State Park. I do not believe that either you or your scientists should be concerned with or be influenced by this subject. (Ross Pilling, Mantoloking)

RESPONSE:
Restoration and preservation of beaches and dunes are undertaken by State and Federal interests for the good of public health and welfare, not just to protect private shorefront property. Since public funds are spent in this endeavor, beach access must be preserved and enhanced for the public.

E. FEDERAL INVOLVEMENT/PARTICIPATION

53.
COMMENTS:

It is up to the State in turn to get the Federal government to contribute their share. (Mayor Andrew Raffetto, Spring Lake)

Where are you going to get the money to pay for this shore protection project? As I pursue this document I found out that you are requesting Federal participation. (Assemblyman James R. Hurley, District 1)

Federal funds to aid in the coastal engineering proposals should be actively pursued. (Robert Halsey, Director of County Planning, Monmouth Co. Planning Board)

What we in Long Branch advocate is some Federal participation to ease the burden of Long Branch, Monmouth, Beach, and Sea Bright, and the rest of the coastal towns in New Jersey when it comes to beach protection and beach erosion protection. (Barry Kamm, Long Branch)

Where are you going to get money for this shore protection program; is there Federal participation and acquisition? It is up to the State to turn to the Federal government to contribute. (Assemblyman Anthony Villane, District 10)

We recommend that the cooperative efforts of the Federal government through the Corps of Engineers be secured as quickly as possible. Not only do we feel that the benefits derived from the projects are of a national nature but we also feel in case of a large-scale national disaster, the Federal government would, upon declaration of State of Emergency participate in the restoration of the shorefront area thus relieving the municipalities from a secondary and possibly devastating tax burden. (Michael Ingram, Engineer, Atlantic City)

While the Draft Plan calls for close cooperation and coordination between the local, State and Federal levels, there are no specific proposals that include the Corps of Engineers participation. Since the Federal government will be asked to fund certain projects in this Master Plan, it would be best now to include Federal authorities in the design stage and to include Federal funding participation on planned funding intervals in the Master Plan. For example, as part of our critique, we have submitted a proposed beach profile for the Atlantic City area. This assumes a future phase of Federal participation in a hurricane and major storm surge protection system. The point is that planning should begin now to assure that the later beach profile coincides with the Corps of Engineers programs. (Michael Ingram, Atlantic City Engineering Department)

RESPONSE:

Appendix D of the Draft Shore Protection Master Plan (see Volume 2, Chapter III of this document), provides a discussion of the conditions for and extent of Federal participation in shore erosion control. Basically, Federal participation relates to public use and benefits and must be authorized by Congress. Participation is greatest where protected areas are publicly owned and appropriate facilities to encourage public use are provided. No Federal funds are provided where the protected shore area is privately owned and there is no public use. When Federal cost sharing is provided, the cost of the State and local interests is reduced and more projects can be implemented with available State funds. Thus, it is in the best interest of the State and local governments that reasonable public access to beaches be enhanced.

The benefits of Federal participation in shore protection go beyond cost sharing for initial construction and beach renourishment. Another important advantage relates to the sharing of costs to restore beaches after unanticipated major losses from severe storm events. Although the degree of cost sharing in restoration of Federally authorized shore erosion control projects is not explicitly given, the maximum Federal share of such emergency projects could be 100 percent.

It is likely that the Federal government (Army Corps of Engineers) will participate in New Jersey shore protection programs to some extent. However, the level of cost-sharing is not clear. Several factors are likely to result in delays in Federal participation in proposed shore protection programs.

1) Detailed Corps of Engineers studies are required in conjunction with preconstruction planning programs. The Corps preconstruction planning program includes the final engineering and design for the project, Congressional authorization for construction, and preparation of plans and specifications. This process normally takes 4 to 5 years.
2) Inability or reluctance of the Federal government to allocate the necessary funds.
3) Inability of State and Federal interests to agree on cost-sharing amounts.
4) Inability or reluctance of State and local interests to meet Federal requirement that public access be provided to beaches developed or improved with Federal funds.

Given the potential delays in acquiring early Federal cost-sharing assistance, the State intends to request Federal participation and early feasibility evaluation of priority programs. In the meantime, the State is proceeding with implementation of priority projects using available bond monies and matching local funds. The State also intends to seek additional bond monies to implement additional projects and maintain projects initiated using Beaches and Harbors Bond funds. If there is Federal participation, Federal monies will be applied to reduce future bond requirements.

Under a variety of programs managed by NOAA, FEMA, and the Corps of Engineers, Federal participation in proposed acquisition programs is also possible. The State intends to solicit funds from appropriate Federal agencies to aid in acquiring open space coastal recreational and natural areas.

54.

COMMENT:

What role do you forsee for the Legislature in the elimination of the Federal programs currently used in the shore areas? How do you know that this is the sense of the legislature? (Assemblywoman Hazel Gluck, District 9)

RESPONSE:

There is no intention by DEP to eliminate Federal shore protection efforts, particularly since it has no control over them. The Master Plan will be used to help decide where the limited Federal dollars, which are likely to be even more limited in the future years, will be spent.

55.
COMMENTS:

The removal of Federal flood insurance would not significantly reduce construction in coastal high hazard areas. Upgrade those Federal Flood Insurance construction regulations, revise the insurance rates to reflect true actuarial rates, tie insurance settlement amounts to relocation, and/or require Federal flood insurance in order to receive postdisaster assistance. (Steve Gabriel, Dept. of Public Works, Ocean City)

To withhold Flood Insurance or disaster aid, when according to your plan are neglecting the job to be done is unconscionable. We are the people who pay taxes too, besides, putting our money where our mouth is. We in the event of disaster will suffer more than any other taxpayer. (Loretta Hanley, Sea Bright)

We strongly support the idea that the Federal Flood Disaster Program should be amended to give aid for relocation rather than for reconstruction and feel that post-storm acquisition of such mobil areas as the tips of barrier islands is an excellent suggestion to be used in conjunction with whatever Federal and State funds are available. In this connection, the State should certainly have the right of first refusal when property in high hazard areas is up for sale. (Kathleen H. Rippere, League of Women Voters)

To do away with the Federal Flood Insurance Program, that is a mistake. That only compounds that adversarial process that we have gotten ourselves into. If the Feds and the State want to come down and take people's houses, people's investments, people's land, people's rights, or whatever – I don't suggest that anybody has a right to insurance – but I do think that they have a right to be able to ask for it, to have that program continue. (Assemblyman John Doyle, District 9)

RESPONSE:

The DEP does not advocate abolishment of the National Flood Insurance Program (NFIP) in coastal areas. To alleviate the conflict that the NFIP poses regarding development in coastal high erosion hazard areas, the State supports modification of the National Flood Insurance Act (P.L. 97-448) to deny federally subsidized insurance for new development and reconstruction in areas designated by the Federal Emergency Management Agency (FEMA) as "coastal high hazard areas" ("Velocity Zones"). Existing insured property would not be effected unless substantially damaged by coastal storms, nor would insured property outside the coastal high hazard area. The consultant recommends that the State support Act amendments to provide post-storm relocation incentives and assistance, and restrictions on disaster assistance for relocation in coastal high hazard areas after major storms. Further, the consultant recommends that an erosion setback be incorporated in delineating coastal high hazard areas. These areas are currently delineated by FEMA based on predicted storm flood levels.

Recent developments in line with the discussion above have occurred on the Federal level. First, due to an operating deficit of about $230 per policy between 1978 and 1980 for flood insurance policies sold in coastal V-zones, in January 1981, FEMA increased the actuarial rates for these policies. This increase amounted to 1.75 times more than the corresponding rates for inland flooding areas. Other actions to improve the fiscal soundness of the program in coastal V-zones include: an October 1981 43% increase in flood insurance rates for existing construction; delineation of storm wave heights in communities along the Atlantic and Gulf coasts to reflect the true flood risk for flood plain management and actuarial rating purposes; and on October 1, 1981, institution of a new actuarial rating system to include the wave height risk factor in V-zones.

Also, Federal legislation (H.R. 3252, S 2686, and S.1018) now in committee would deny Federally subsidized flood insurance for development in certain undeveloped, unprotected coastal barrier island sectors.

56.
COMMENT:

It is the Federal Government's responsibility to protect flood-prone areas. (Assemblyman Anthony Villane, District 10)

RESPONSE:

With the National Flood Insurance Act of 1968 (P.L. 90-448) the Congress created the National Flood Insurance Program (NFIP). The NFIP stated goals are: "To...encourage State and local governments to make appropriate land use adjustments to constrict the development of land which is exposed to flood damage and minimize damage caused by flood losses," and to "guide the development of proposed future construction, where practicable, away from locations which are threatened by flood hazards." The intent of the Congress in enacting the NFIP was to reduce individual exposure to flood loss and losses resulting from land collapse (erosion) caused by flood waters for those who were already residents in flood prone areas. The program at present makes Federal flood insurance available to owners of existing structures at rates that are still subsidized, but becoming closer to the true actuarial rates. Coverage for new construction is available only at actuarial rates.

57.
COMMENT:

The plan does not recognize the role of the Federal government in regulating the discharge of dredged and fill material through Section 404 of the Clean Water Act. On page 1-33, it should be recognized that the filling of tidelands requires a permit from the Corps of Engineers in addition to a state permit. (Barbara M. Metzger, USEPA, Region II)

RESPONSE:

The Federal role in regulating discharges of dredged and fill materials through Section 404 of the Clean Water Act is discussed in Appendix D, Section D.1.a (2) of Draft Shore Protection Master Plan (see Volume 2, Section III.C.1.a(2) of this document).

58.
COMMENT:

On Draft Master Plan page D-10 (Figure D-1), the procedures shown for Phase I Pre-Construction Planning will depend on the type of Congressional authorization of the project. Certain projects are only Congressionally authorized for Phase I work and not for construction. Such projects are then considered by Congress for construction authorization after Phase I is concluded. (D.J. Sheridan, U.S. Army Corps of Engineers, Philadelphia District)

RESPONSE:

Thank you for clarifying the procedures for Federal participation in shore protection. Appropriate corrections have been incorporated in the final document.

59.
COMMENT:

It is my understanding that Congressman Hughes is working with legislation at the federal government level to give the Corps of Engineers the ability to get into nonstructural kinds of beach protection measures which are being proposed by your plan. We would suggest that the State should strongly support that kind of approach so we can get the federal dollars to help pay for the time the engineers proposed the plan. (Elwood Jarmer, Planning Director, Cape May County)

RESPONSE:

Although the State of New Jersey considers beach nourishment as a non-structural shore protection alternative, the Corps of Engineers does not. The Corps treats beach nourishment the same as structural alternatives under its cost-sharing program.

F. FUNDING, BENEFIT/COST ANALYSIS

60.
COMMENT:
The plan methodology of establishing a priority list for Reach Engineering Programs is a fair method of determining the order of implementation of the several reach engineering programs. (Michael Hyland, Upper Township Engineer)

RESPONSE:
Thank you.

61.
COMMENT:
We also highly support the cost-benefit analysis as being the primary tool to decide which projects will receive priorities at the state level. We feel that the cost-benefit analysis is the best overall tool for assigning dollars. (Michael Ingram, City Engineer, Atlantic City)

RESPONSE:
Thank you.

62.
COMMENT:
The bill in this piece of Master Plan covers a very important part of what is the Federal responsibility. Do you know that the Federal responsibility is that whenever the Federal Government has built a device to maintain channels or rivers, that the erosion resultant to that building by the Federal Government is their responsibility. It is their responsibility up to 100 percent if we could prove that. (Assemblyman Anthony Villane, District 10)

RESPONSE:
Federal responsibilities in shore protection matters are clearly stated in Appendix D of the Draft Shore Protection Master Plan (see Volume 2, Section III.C.1.a(1) of this document).

63.
COMMENTS:
All the people of the State should share equitably in the cost of beach restoration, preservation, and maintenance since they all derive benefits from our beaches. A portion of the sales tax revenues derived from beach related tourism and business be dedicated for beach projects. (Mayor Martin Vaccaro, Allenhurst)

How do we pay for it? Sell the people on the fact that if you want to go to the seashore, it is going to cost you another one percent on that sales tax. Raise it to that six percent; earmark it specifically; the millions of dollars to take care of our beachfront. (Mayor James Wood, Stone Harbor)

RESPONSE:
Only if the Legislature chose to change the law, could sales tax revenues and beach fees be used to help defer protection costs.

64.
COMMENT:
It is needless to say as to whether or not community funds should be 10 percent or 25 percent. The particular communities have examined their budget and that is the maximum that we can afford. Other funding sources which can be influenced are utility companies, Monmouth County, the State of New Jersey, and the Federal Government. (Stephen DePalma, Schoor, DePalma & Gillen, Inc.)

RESPONSE:
Comment is noted.

65.
COMMENTS:
The Plan anticipates future bond issues to fund the 50-year program. How can the Plan expect a voter to approve for future expenditures in the most densely populated areas, and the Jersey coast are those very areas that have the lowest priority? (Mayor Andrew Raffetto, Spring Lake)

The Draft Master Plan recommendations are unrealistic and unresponsive to the desires of the Legislature and the people of the State. It should have as its objective the restoration and preservation of the entire shoreline, not the abandonment of a major portion. No future funding is recommended for the remainder of the shoreline; that is, the portion outside the five priority reaches.
The long-range program should not be constrained by presently available funds. It should be a comprehensive program implemented in phases as additional funds are made available. (Mayor Martin Vaccaro, Allenhurst)

It is important that provision should be made for revision to include future programs or engineering developments that may become available. Also the priorities should not be so inflexible as to defer eligible projects of lower priority to higher priority projects for which funding is not available. (J. Thomas Wood, Borough Engineer, Egg Harbor)

RESPONSE:
In any plan involving distribution of limited funds using a priority scheme, there are winners and there are losers. Every project can't be at the top of the list. As one can see from reviewing the estimated costs of the various engineering alternatives evaluated in the Master Plan, the cost of doing anything, other than structural maintenance, on a statewide basis would require funds far in excess of those currently available. As additional bond funds become available for shore protection, the DEP plans to work its way down the priority list for engineering projects, as well as implementing emergency projects and selected non-reach engineering projects.

66.
COMMENT:
Let me say one other word on funding. More recently, funding has been 50/50. I don't think this approach is correct. Citizens of the State of New Jersey should pay in the proportionate amounts which are beneficial to all citizens and that it more than half and half.
If it does help the commerce and industry of those municipalities, and to the degree that is all true, the municipality should put in something but should be limited to 25 percent. (Assemblyman John Doyle, District 9)

RESPONSE:
The DEP agrees and has publically supported this position. The proposed funding formula sets the local share at 25%.

67.
COMMENT:
The Draft Master Plan certainly contains the explicit and implicit threat that no shore protection funding will be forthcoming for any municipality which does not have as one of its ordinances the land management provisions as suggested by the Draft Plan. There should be a clear statement that State funding for engineering projects to protection shorefront and prevent erosion will not be dependent upon the contents of any municipal ordinance. (David Fisher, New Jersey Builders Association)

RESPONSE:
It is within the Department's area of responsibility to encourage the use of sound land use controls as a means of non-engineering shore protection, and to insure that State funds will not be used for projects in areas where the general public is exeluded. Accordingly, State grants for projects are and will continue to be conditional on consistency with the Department's Coastal Resource and Development Policies in five areas: public access, beach protection, dune protection, coastal flood hazards, and coastal erosion hazards.

68.
COMMENT:
The method of funding development along the shore requiring participation by the local municipalities is impractical and burdensome to the municipalities. (Philip Judyski, Borough of Avalon)

RESPONSE:
A bill now before the State Legislature would raise the State share to 75% while dropping the local share to 25%.

69.
COMMENT:
Atlantic City recognizes that the utilization of cost/benefit analyses is the correct way of solving governmental priorities for beach erosion programs. This method assures proper and unbiased assignment of public funds to the projects that are of most utility to the State's residents and visitors. (Michael Ingram, Atlantic City Engineering Dept.)

RESPONSE:
Comment is noted.

70.
COMMENT:
The plan appears unworkable since it relies on the present legislated funding formula which requires municipalities to finance 50% of the cost of any beach protection facility. (Robert D. Halsey, Director, Monmouth County Planning Board)

RESPONSE:
The DEP agrees and has publicly supported this position. The proposed funding formula sets the local share of 25%.

71.
COMMENT:
We feel that in the case of the shore, projections for even a 10-year period - not to mention a 50-year period - are too long in terms of cost or applicability of recommended actions. (Kathleen Rippere, Natural Resources Chairman, League of Women Voters)

RESPONSE:
Long-term planning is essential if the mistakes of the past are to be avoided. However, as you point out, the data base from which to make acceptable projections is often lacking. Recreational demand is one such data element. Recognizing the imprecise character of the recreational demand data, the consultant has incorporated opportunities at about 10-year intervals to reevaluate the requirement for beach expansion. The traditional approach of designing a beach fill for construction now to satisfy the projected demand in 50 years from now is thereby avoided.

72.
COMMENTS:
It is also strongly recommended that every consideration be given to revising the State/Local participation to 75%/25% respectively. (J. Thomas Wood, Borough Engineer, Egg Harbor)

We request that a 50-50 State-Municipal sharing be changed to 75-25. Due to the Cap law and other local budget constraints, Ventnor City would not be able to raise their share at the 50 percent level. (Robert Bos, Engineer, Ventnor; Michael Ingram, Engineer, Atlantic City)

RESPONSE:
Pending legislation supported by DEP will accomplish this.

73.
COMMENT:
In Long Beach we also advocate what Monmouth Beach and Sea Bright have said about 75/25 for the match requirements. (Barry Kamm, Long Branch)

RESPONSE:
Comment is noted.

74.
COMMENT:
For reaches where specific engineering plans are unwarranted due to inadequate benefit/cost ratios, we recommend that local projects be approved if they are cost effective and if they do not create adverse impacts, not only within its specific reach, but also upon adjacent reaches subject to the same littoral drift. (Paul Dritsas, American Littoral Society)

RESPONSE:
The Master Plan does allow for implementation of local non-reach engineering projects. Such projects are acceptable if they can be demonstrated to be economically justifiable on a case-by-case evaluation and they do not create adverse impacts. This approach would ensure expenditure of State and local funds in a sound and equitable manner.

75.
COMMENT:
The Plan is a capital project that should be done on a regional basis, on an ongoing basis, and on a large scale master plan basis. At least we have made that step from maintenance to capital, and I think that is the healthiest step. I think the planning ought to start on not only the priorities of spending that, but where the next bond issue is going to go. (Assemblyman John Doyle, District 9)

RESPONSE:
Agreed.

76.
COMMENT:
I don't think that the municipalities on the New Jersey shore should be required to pay for shore erosion control twice. You paid once when you paid off the bond with your taxes, and you'll pay it off again when you pay off your local taxes to pay your match. (Assemblyman Anthony Villane, District 10)

RESPONSE:
Comment is noted.

77.
COMMENT:
What will happen if, in fact, a municipality may not be able to meet its financial obligation? Does that mean that the project in that reach will be abandoned?
By the State Cap Law, we cannot raise the money. Why hasn't this been taken into account? (Mayor Andrew Raffetto, Spring Lake)

RESPONSE:
Both the revised funding formula and pending legislation address this concern.

78.
COMMENT:
I don't believe there are many municipalities who can actually afford matching funds unless municipalities are allowed to spread this out for a long period of time. (Mayor Robert Nissen, Ship Bottom)

RESPONSE:
Comment is noted.

79.
COMMENT:
Complicating the effectiveness of this Plan, is the lack of adequate funding to provide for even a reasonable approach to a solution, one which will satisfy all affected and interested parties. (Leon Avakian, Municipal Engineer, Asbury Park)

RESPONSE:
Comment is noted.

80.
COMMENT:
The Draft Master Plan concludes that an engineering solution is warranted for only five reaches of the New Jersey coastline. Only for these five reaches, the most cost effective alternative engineering solutions result in cost versus benefits ratios greater than one. The report further concludes that the ratio is less than one for all other reaches and an engineering solution is therefore not warranted for them.
I find it difficult to believe it is merely coincidental that the total of the initial four year costs for the five priority projects is just about equal to the funds remaining in the Bond Issue, plus expected local matching funds. (Martin Vaccaro, Borough of Allenhurst)

RESPONSE:
It is in fact coincidental that the initial costs for the five priority engineering projects was about equal to the Bond Issue funds remaining at the time of release of the Draft Master Plan (approximately 18 million) plus expected local matching funds. However, it must be pointed out that that amount of money was insufficient to completely cover the 50-year project cost for even the first priority project at Peck Beach (Ocean City). Additional monies will be required to complete the priority projects and to implement additional emergency and non-priority projects.
As discussed in Volume 1, Section II.B.3, the DEP intends to set aside about one third of available shore protection funds for implementation of non-reach and emergency engineering projects. Thus, of the $15 million remaining in the Beaches and Harbors Bond Fund in 1981, only $10 million is available for State cost sharing of priority reach-level projects. Even with local matching funds, this money is insufficient to initiate all of the priority reach projects.

81.
COMMENT:
The next question is: Why don't you bond it? Shore maintenance and repair work has to be paid for out of taxes. (Mayor Andrew Raffetto, Spring Lake)

RESPONSE:
The DEP will use the remaining funds from the Beaches and Harbors Bond Fund to cover the State's share of implementation of priority reach engineering projects, emergency projects, and selected non-reach projects, during the next five years additional bond funds will be required. To maintain the priority reach projects and initiate additional engineering programs.

G. COASTAL REGULATIONS-DUNE LEGISLATION

The comments and responses in this section are related to coastal regulation. Under the General category, generic comments on coastal regulation are addressed. The comments relating specifically to the proposed Dune and Shorefront Protection Act of 1980 (A-1825) are provided separately under the section by that heading.

1. General

82.
COMMENT:
One also questions whether the scope of this Draft Shore Protection Master Plan was really mandated by the 1977 Beaches and Harbors Bond Act or 1979 Appropriation Bill. It would seem that the thrust of both these bills was to protect the beaches from erosion, not to control land use in terms of residential construction. The regulation of the use of the shorefront properties should be left to the local governing bodies and the existing regulatory agencies. (David Fisher, N.J. Builders; Mayor Francis Pyanoe, Belmar; William T. Birdsall, The Birdsall Corporation)

RESPONSE:
Land use regulation and beach protection can no longer be separated. Without effective regulation, all erosion control is wasteful, and ultimately ineffective.

83.
COMMENTS:
On Draft Master Plan page V-60, paragraph #5, if a beach builds seaward will the erosion setback line be adjusted seaward? (Steve Gabriel, Department of Public Works, Ocean City)

The consultants approve of a seaward delineation of any erosion setback line when beach migration patterns are temporarily subdued by beach fill and nourishment. This proposal raises numerous questions. Will an increase in sand serve only as more shorefront land available for development? The proposed increases in beach berm width are an improvement over present conditions but they must not provide a false sense of security that our barrier island developments are well protected or that threats to public safety are reduced. A seaward delineation of an erosion/dune line is in direct conflict with the intent and spirit of this master plan and we strongly oppose such a recommendation. (Paul Dritsas, American Littoral Society)

RESPONSE:
So long as shoreline erosion is controlled through engineering projects such as beach filling and periodic renourishment, the erosion hazard and need for an erosion setback is diminished. The purpose of an erosion setback is two fold: it is intended to provide protection of existing natural beach and dune resources at a minimum; and is intended to minimize danger to life and property within the erosion hazard area – that area which is expected to be effected by shoreline erosion during a specific planning period (in this case 50-years) given existing long-term erosional trends and short-term storm related effects. In any case, given the unpredictability of inlet formation, storm overwash and short-term erosional trends associated with severe storms, adjustments in construction setbacks are not recommended seaward of existing beach and dune areas. Also, there is no guarantee that shore protection funds will be available for beach maintenance over a given period of time. This is especially true since repeated destructive storms can drain available funds over a short period of time. These same uncertainties also obviate the need to periodically re-evaluate erosion setback delineations to accommodate changes in erosional trends and erosion control projects.

84.
COMMENT:
Land use regulation is suggested in the Plan as one of the areas that has to be employed. We have talked about it personally before, and I still think that the better approach is the model ordinance approach. Let the State suggest the parameters of the model ordinance. Let the municipalities ordain it, and let them regulate it. (Assemblyman John Doyle, District 9)

RESPONSE:
Comment noted.

85.
COMMENT:
I would agree with John Doyle when he talks about having municipalities in a model ordinance. (Assemblywoman Hazel Gluck, District 9)

RESPONSE:
Comment is noted. The DEP also agrees.

86.
COMMENTS:
Because it is clear that the engineering recommendations in the draft plan are based upon the assumption that the regulatory proposals outlined in the plan will be enacted by the State, the engineering recommendations should be re-evaluated in light of the latest revisions to the proposed Dune and Shorefront Protection Act. (Alfred Scerni, Director of District Office Operations for U.S. Congressman William J. Hughes)

On Draft Master Plan page ES-3, "Recommended Plans," the recommended plan has components which it states are intregal with its successful implementation which consist primarily of land management and acquisition and not of structural engineering projects. (William T. Birdsall, Birdsall Corporation)

RESPONSE:
Development of the proposed alternative engineering projects was not contingent upon implementation of proposed regulatory alternatives. Nor is implementation of the land use regulation or land acquisition alternative recommended to the exclusion of alternative engineering programs, or the reverse. The Shore Protection Master Plan provides for implementation of all of the component programs to preserve existing beach and shore resources and reduce erosion losses suffered with the passage of time and occurrence of destructive storms.

87.
COMMENT:
A contrast is struck between engineering alternatives which reduce the direct, adverse effects of erosion on shorefront property and the non-engineering approaches which seek to avoid future erosion losses. There is no direct answer, at least in terms of economic cost, to those who feel that creation of large beaches backed by adequate seawalls can be employed to avoid future erosion losses and eliminate the need for a Land Use Management scheme including the Dune and Shorefront Protection Act. (Steven Gabriel, Office of Public Work, Ocean City)

RESPONSE:
Comment is noted.

88.
COMMENT:
In our opinion local agencies have not successfully dealt with the problem (of coastal regulation). The Ocean City Environmental Association supports State control to address beach issues. We agree with the concept of homeowners being compensated by other means than federal tax dollars. If a homeowner wants to rebuild (after a storm), disregarding the safety of life and property, then let it be his or her total responsibility and the use of private funds – not federal tax dollars. Because of this philosophy, the Ocean City Environmental Association recommends support of Senate Bill 2686 which aims to save tax money by prohibiting federal subsidies of building on coasts. (Marie Dugan, Ocean City Environmental Association)

RESPONSE:
Thank you for your comments.

89.
COMMENT:
The Draft Master Plan does not adequately address the difference between existing and proposed development. Many people have built homes and businesses in reliance on past and present laws, regulations and programs of both Federal and State governments. The Atlantic Ocean has moved westward into areas which have been previously developed, but no distinction is made between these properties and those which were already threatened when developed. (Robert D. Halsey, Planning Director, Monmouth County)

RESPONSE:
The issue goes beyond the nature of the affected development. Draft Master Plan recommendations are offered so that past errors in shore protection and hazard area development (or redevelopment after storm) are not repeated.

90.
COMMENT:
"Programs to encourage relocation out of coastal hazard areas are necessary." Why, is the question. (Robert Latorre, Publicity Director, Seaside Hts.)

RESPONSE:
Post-disaster relocation incentives and assistance are recommended as a responsible approach to mitigating recurrent losses resulting from unwise post-storm redevelopment practices in high hazard areas.

91.
COMMENT:
On Draft Master Plan page IV-3 under #4, predicating the amount of insurance settlements on rebuilding destroyed structures out of hazardous areas is a good economic incentive for vacating the immediate shorefront while leaving the ultimate decision in the hands of the private individual. (Steven Gabriel, Dept. of Public Work, Ocean City)

RESPONSE:
We agree and have so stated in Volume 2, Section IV.C.3.c.

92.
COMMENT:
"Land regulation of coastal hazard areas can provide a long-term mechanism for effective mitigation of erosion losses: such regulations should be in place prior to the next major storm." How can a regulation protect a piece of land? (Robert Latorre, Publicity Director, Seaside Hts.)

RESPONSE:
Land regulation, such as construction setback regulation, is recommended as a means of precluding future private and public property losses that would otherwise occur if development is allowed in erosion hazard areas. Land regulation will not protect existing development from losses associated from gradual shoreline erosion or destructive coastal storms.

93.
COMMENT:
It is unclear how development along the beachfront in and of itself has adversely affected the beaches of the State. There have been efforts by private property owners to stabilize previously unstabilized dunes and to build up dunes with the recognition that these dunes will protect these shorefront residences from storm damage. Until a direct causal relationship is established between the construction of all shorefront residences and beach erosion land management techniques which preclude such beachfront development should not be suggested or implemented. There should be some type of mandatory municipal program of dune stabilization. (David Fisher, N.J. Builders Association)

RESPONSE:
The land management scheme proposed in the Draft Master Plan is based on the fact that a relatively narrow near shore area is highly dynamic. Migrations of the land/water interface in this area are subject to a long-term trend and a potential for rapid erosion loss during storms. Private owners who recognize the need for a buffer between their homes and the ocean and have provided sufficient space for the development and stabilization of dunes are already in keeping with the spirit of the land management proposal and would probably not be significantly affected by its implementation. What the regulation seeks to prevent is the unwise development which is insensitive to the function and dynamic behavior of the dune and beach areas. With the passage of time and the occurrence of storms, losses suffered and the related threats to public health and welfare will decrease as a result of any reduction of beachfront development.

94.
COMMENT:
Land regulation of a defined area, actually a thin strip of the coast, wide enough to allow the ocean's dynamics to build the lands natural protection, is what's needed. In this coastal hazard area largely developed there should be no further development of anything that would interfer with the natural buildup of the dunes. (Winifred Meyer, American Association of University Women)

RESPONSE:
Comment is noted.

95.
COMMENT:
On Draft Master Plan page V-59 there seems to be a statement that erosion would continue without implementation of engineering techniques, notwithstanding any land management techniques. On page V-60 there appears to be an indication that erosion would be arrested if the land management techniques involving the fifty percent no rebuild alternative were imposed. This appears to be a contradiction without explanation. (David Fisher, N.J. Builders Association)

RESPONSE:
The evaluation of land management alternatives indicates that erosion is expected to continue where a land management alternative is implemented in place of an engineering alternative. The discussion of Draft Master Plan page V-60 states clearly that the beach would migrate naturally under a land management scheme. Eventually the migration of the beach/dune area would encroach upon developed public and private property immediately inland, inflicting property losses. However in the long term, property losses to erosion would be minimized where new development and redevelopment in the erosion hazard zone is reduced through regulation.

96.
COMMENT:
I believe that land management programs will not build beaches. Only well engineered structures and a steady source of sand will maintain the wide beaches along the shore front.
I recommend that the State of New Jersey abandon the proposed Shore Protection Master Plan and immediately commit bond issue funds to those areas which are in need of beach erosion protection. I also feel that the regulation of the use of the shore front property should be left to the local governing bodies and the existing regulatory agencies. (Mayor Thomas Black, Borough of Sea Girt)

RESPONSE:
Draft Master Plan Figure II.D-2 illustrates that although erosion continues in a natural or unrestricted environment, beach widths are maintained naturally. When coastal development encroaches on the dynamic (migrating) beach area, a reference point is provided for recognizing natural shoreline fluctuations and beach erosion become readily apparent and threatening. Land management programs seeks to discourage development in the dynamic beach area, thereby allowing the natural maintenance of beach widths.

97.
COMMENT:
Throughout Chapter V of the Draft Master Plan reference is made to the 50-year erosion setback line. Over what time period did the erosion rates occur which are the basis for establishing that setback line? What information is there that indicates that those rates will continue over the next 50 years, or on the other hand, won't reverse themselves over that time period? (Steven Gabriel, Dept. of Public Works, Ocean City)

RESPONSE:
The consultant recommends delineation of the erosion hazard area considering historic long-term erosion rates projected for 50 years. In the Draft Master Plan the consultant utilized erosion rates from Nordstrom and others (1977). That data was developed for the New Jersey ocean and bay shore using aerial photographs taken from 1952 to 1971. These are the only erosion rate measurements which have been uniformly analyzed for the entire State. Annual erosion rates estimated by Nordstrom were multiplied by 50 years to determine the distance (setback) that the shoreline is expected to retreat if the historical rates continue unchanged. Changes in the migration of the shoreline during the planning period would be incorporated in the setback scheme through a reassessment of the setback line approximately every five years.

98.
COMMENTS:
The Draft Master Plan fails to consider what portion of the value of an oceanfront lot is directly or indirectly dependent on State and Federal actions, including: federally subsidized insurance, infrastructures support and erosion control projects. Under the acquisition alternative, projections of cost should consider both the savings of engineering costs as well as the reduction of land values resulting from the abandonment of coastal engineering projects.
Although regulation restricting development and public acquisition of shorefront will reduce tax revenues, municipal costs will also decline as a result of the savings of funds which would otherwise be expended on coastal engineering and the reduction of the costs of providing other services. Moreover, the Plan's determination that regulation and acquisition will limit the level of multiplier spending impacts resulting from recreational beach use is founded on the unsubstantiated assumption that beach use is directly correlated to dry beach area. (Gary Grant, Natural Resources Defense Council)

Projected impacts of land management alternatives should possibly be quantified. Costs, benefits, and possible funding sources of engineering alternatives are not specified. (Richard A. Ginman, Division of Planning, Dept. of Community Affairs)

RESPONSE:
Volume 2, Chapter V includes a generic assessment of quantifiable and nonquantifiable socioeconomic impacts associated with the land management alternatives which were evaluated. This level of analysis is appropriate for the purpose of master planning. A more detailed analysis of socioeconomic impacts would be more appropriate on a case-by-case basis when specific land regulation or land acquisition alternatives are in the throws of implementation. Implementation of the land management alternative proposed in the Draft Master Plan is not being assumed for the final Shore Protection Master Plan.
Costs, benefits, and potential funding options for proposed engineering alternatives are provided in detail in Chapter V of the Draft Master Plan (see Volume 1, Section II.B).

99.
COMMENT:
The Plan fails to include adequate provision for the implementation of land management techniques. (Gary Grant, Natural Resources Defense Council)

RESPONSE:
In accordance with its stated coastal management policies, the DEP intends to move forward to develop land management tools for managing the State's shore erosion problems. In particular, the DEP will work closely with coastal municipalities to develop workable regulatory beach and dune legislation. However, the implementation of such legislation is not being assumed for the purposes of this Shore Protection Master Plan.

As it has through Green Acres Program, the DEP will continue to consider selected acquisition of shorefront areas, particularly of heavily storm damaged areas. The location and extent of such purchases will depend on case-by-case evaluation, including consideration of available funding.

100.
COMMENTS:
"One objective of barrier island management is to direct holdings within the dune district into public ownership... The basis for land transfer involves either prevention of use for the reasons of safety and welfare using police power without compensation or purchase of property for the public good." Nowhere can I find that your studies recognize the rights of lawful property owners who have lived on the dunes for nearly 100 years. Nowhere can I find any recognition of a need to strike a best possible compromise between the obvious desirability of totally undisturbed dunes and the fact that many peoples' homes are on these very dunes. Further, the day when these houses were vacation homes is fast disappearing; these are our homes and our only homes. (Ross Pilling, Mantoloking)

The plan gives little consideration to the illegal consequences of its proposals. The proposed regulatory format outlined in the plan amounts to a taking of property and development rates upon the appearance of a future condition and essentially it constitutes a condemnation of private property. Nowhere in the plan, do the authors recognize any obligation of the State to reimburse property owners to such a taking. The regulatory proposals go far beyond traditional land use control and prevents serious constitutional issues. (Alfred Scerni, for U.S. Congressman William J. Hughes)

RESPONSE:
Volume 2, Section V.C.3 (Feasibility/Implementation of Land Management Alternatives) contains a detailed discussion of the "taking" issue which is a legally complex and important consideration in coastal regulation. However, it should be noted that the Dune and Shorefront Protection Act proposed in 1980 is no longer being considered by the Legislature for enactment.

An expanded discussion of dune legislation and the Dune and Shorefront Protection Act is provided in Section III.G.2 of this Volume.

101.
COMMENT:
Federal Flood Insurance regulations that prevent repetitive hemorrhaging of public funds are reasonable. The refusal of government to undertake unsound, expensive restoration work is justified. A revised section to the BOCA Code applying to shorefront structures is in everyone's interest. Proper setbacks adjusted for each community that require new building or rebuilding to stay clear of the "Active Zone" again is in everyone's interest. The prevention of physical damage to dunes either willful or unwillful - is mandatory. In short, put your scientists to work on the compromise solutions that we can use in our local ordinances. (Ross Pilling, Mantoloking)

RESPONSE:
Comments are noted and appreciated.

102.
COMMENT:
The Consultants states on page VI-11 of the Draft Master Plan that boardwalks and related structures provide high levels of public access to beaches. We disagree with the assumption and recommend that any future shorefront regulatory program prohibit boardwalk reconstruction seaward of an erosion/dune setback line. (Paul Dritsas, American Littoral Society)

RESPONSE:
This section of the Draft referred to the proposed Dune and Shorefront Protection Act which is no longer under consideration. "Dune setback lines," as proposed in that Act, do not, therefore, exist in New Jersey. DEP agrees that siting of future reconstruction of boardwalks should be intelligent and should conform to recent changes in Federal Flood Insurance standards and the DEP's Coastal Resources and Development Policies.

2. Dune and Shorefront Protection Act – Dune Legislation

A large number of comments concerned the role of the proposed Dune and Shorefront Protection Act (A-1825) in the Master Plan, including the provisions in the Act which would have prohibited the reconstruction of properties which have been more than 50% damaged as a result of storm action. Other commentors objected to what they saw as the limited role of local governments in developing and implementing a model ordinance.

Since the Draft Shore Protection Master Plan was released, A-1825 has been withdrawn from the Legislature and two much more limited dune protection bills have been introduced. Any such act would have to be passed by the Legislature; it could not be adopted by an administrative agency such as DEP.

The Shore Protection Master Plan will be used by DEP to administer the laws and programs entrusted to it. Accordingly, the Final Master Plan does have a "Land Management" component, and in so doing recognizes the impact that land use practices have had and will have on the State's shore protection efforts. At the present time, this component consists only of CAFRA, the Wetlands Act, and the Waterfront Development Law, all of which are rarely applicable to the present pattern of open beach, shorefront development. The Draft Shore Protection Master Plan recognized this deficiency as well as the deficiencies in local regulation which have resulted in existing conditions, and endorsed A-1825 as a remedy. The DEP is committed to the idea of effective shorefront land use control. However, unless and until a shorefront protection act is passed, the Land Management component of the Master Plan will remain as described above.

The 50% clause preventing reconstruction of development heavily damaged by a storm in the original bill (it does not appear in the versions now being considered by the Legislature) was intended to strike a balance between the need for accommodating the dynamic geologic processes acting on the shorefront and the need to protect existing development. It was felt that any property so damaged was located in an area in which it would be imprudent to rebuild. In that sense, it resembles the non-conforming use provisions in many local ordinances. Local ordinances in other states, do, in fact, prohibit such reconstruction. In recognition of this fact, the Federal Emergency Management Agency (FEMA) has adopted a "constructive total loss" philosophy, which holds that any property which is more than 50% storm damaged is eligible for the full amount of its flood insurance coverage. This would allow property owners who are prohibited from rebuilding in hazard areas by local ordinances to relocate without suffering a financial loss.

The various pieces of legislation which have been introduced since the withdrawal of A-1825 give municipalities a greater role in the development of model and actual ordinances. The Department favors this greater emphasis on local participation.

The following comments relate to the Dune and Shorefront Protection Act which has been withdrawn.

103.
COMMENT:
I strongly object to the proposal that the State establish and regulate a zone that would prohibit the rebuilding of a structure damaged by a storm by more than 50 percent of its fair market value. (Mary Macfarlane, Sea Isle City)

RESPONSE:
Comment is noted.

104.
COMMENT:
The Draft Master Plan appears to have been prepared as a justification for the Dune and Shorefront Protection Act. What this report and the Dune and Shorefront Protection Act fail to realize is that it is too late to halt development of the ocean shore line. It has already taken place. To resolve the problem with a policy of gradual retreat is completely unrealistic and down-right ridiculous. And the means by which it is proposed to do this amounts to confiscation of private property and, I assure you, will be tested for its constitutionality. (Thomas W. Birdsall, Birdsall, Gerkin - Dolan, PA. - Municipal Engineering-Planning)

RESPONSE:
Noted. We disagree with the first statement. The engineering plans for each reach are the principal thrust of the plan to be used by DEP in implementing existing laws.

105.
COMMENT:
On Draft Master Plan pages ES-4, under the item "Coastal Regulation", I believe that the Master Plan has placed too much emphasis on the proposed Dune and Shorefront Protection Act. (William T. Birdsall, The Birdsall Corporation)

RESPONSE:
Comment is noted.

106.
COMMENT:
As you know, when the Dune and Shorefront Protection Act was first introduced last summer, a significant amount of public opposition was generated in shore communities. We suggest that the Master Plan include a provision for an extensive, ambitious, and on-going public education program. The successful implementation of the Shore Protection Master Plan will depend in large part on the support of the affected public. The goal of the program should be to show property owners how the plan and land use management will protect their lives and property. (Barbara M. Metzger, U.S. EPA Region II)

RESPONSE:
Comment is noted. We agree and are already planning this program.

107.
COMMENTS:
The component of this Draft Master Plan that appears to have the greatest impact on coastal land owners is the Dune and Shorefront Protection Act (Assembly No. 1825). The Act effectively restricts and/or prohibits new, expanded, or rebuilt development with paving and/or structures on beaches, unless the proposed development is (i) publicly funded and (ii) has no prudent or feasible alternative on a non-beach location.

The dune and shorefront area includes all land area from Sandy Hook to Cape May Point along the Atlantic Ocean lying between the ocean waters and the first paved road for motor vehicles together with all shorefront properties. In examining the New Jersey Atlantic coastline one can see that there are two present strips that are part of existing state parks. In the extreme northern end of the coast is the Sandy Hook State Park. A second park lies off of Ocean County, this is the Island Beach State Park which extends from below Seaside Park to Barnegat Inlet. The proposed legislation is intended to create more public land that can be assigned some form of state park status. If one begins to examine the coastline of New Jersey is becomes somewhat apparent that the proposed legislation will have its most significant impact on Ocean County, basically from Mantoloking to Holgate. There are a number of reasons why this may be true and they are stated below.

The proposed legislation contains an exception clause which states that the legislation does not prohibit reconstruction of boardwalks or structures on or directly connected to boardwalks. This clause excludes the law from impacting on Atlantic City, Ocean City, and Wildwood. All of these communities have relatively high population densities, and visible and significant commercial interests. As the legislation moves through the hearing process and through committees there will be more exceptions and exemptions, especially for areas with large populations and/or visible commercial interests. Also the law should have no significant impact on areas that are attached to the mainland. This law could have extreme reprecussions and from a political standpoint, any community with significant commercial interests will probably successfully fight the legislation. The planners themselves will very likely move for some exceptions to ward off powerful opposition.

Given the above observations, the proposed legislation should not have a significant impact on Monmouth County. Monmouth County runs along the coast from Sandy Hook to Manasquan Inlet. The majority of this coastal strip is on the mainland and the population density in this area is relatively high. Both the sizeable all year population base and the significant business interests will mitigate against any substantial impact in this area from the proposed legislation. If one moves down the coast below Ocean County to Atlantic County the same conclusion can be drawn. With the exception of Brigantine Beach, the Atlantic County coastal strip involves strong commercial interests and a significant year round population that will preclude any significant impact.

Atlantic City is excluded from the bill because of its boardwalk, but the communities of Ventnor, Margate City, and Longport should have sufficient political power to block the impacts. If one moves south of Atlantic County into Cape May County the same conditions and characteristics prevail. The strip from Ocean City to Cape May represents the largest commercial investments on the coast, with the exception of Atlantic City, and these established commercial interests will effectively block the legislation's impact. Another fact to consider is that any area that has a significant population base is not a good candidate for the state's public land conversion. From a planning standpoint the ideal area for the creation of coastal public lands is the island strip off of Ocean County.

If this legislation is passed, the greatest incidence of impact will be on the strip from Mantoloking to Holgate. This strip has all of the positive characteristics for conversion. The strip is relatively thin, and it is all detached from the mainland with very limited access. The most important consideration is that it is thinly populated and, other than a few exceptions, it has no substantial commercial interests and investments. Also, the mainland that is contiguous to this strip is thinly populated especially at the southern end. It is the opinion of this analyst that the area most likely to suffer the greatest impact from the proposed legislation is Ocean County and, in particular, the island strip from Mantoloking to the Beach Haven Inlet.

The proposed legislation will have an intermediate and long term effect. The legislation if passed will result in removing some of the fixed land supply from private use and converting it to public use. As the legislation takes effect, the following results should occur: Land that is likely to fall under the law, that is, conversion to public use, is going to quickly lose value. (This is particularly true if the flood insurance clause is passed). The loss in value will be drastic on beachfront property but it will also cause a decline in the value of all land and property in affected communities. Therefore, it is not only the beachfront property owners that will suffer declining valuation, but all land owners in the community will suffer from investor uncertainty. Secondly, as privately owned beachfront land declines in supply, the existing supply will become more valuable. Any community that is legally exempted from the law or any area that is not a feasible candidate for takeover will benefit because of the state created scarcity of beachfront property along the New Jersey coast. (Alvin A. Clay, Dean, College of Commerce & Finance, Villanova University)

RESPONSE:

Your comments and analysis of the impacts of proposed land regulation legislation alternatives are noted and appreciated. We note that your findings are generally consistent with the findings of the socioeconomic impact assessment for land regulation provided in Volume 2, Section V.C.2.

108.

COMMENT:

I object to the inclusion of proposed Assembly Bill No. 1825 Dune and Shorefront Protection Act. At the time of publication, this bill had not passed the legislature. I have a copy of the Hearings Vol. I and II and conclude that it is thoroughly objectional to the people affected. Since our type of government is based on the Constitution and government exists to serve the people, I suggest the DEP work with the Mayors of the shore communities in preparing legislation acceptable to both. (Loretta Hanley, Sea Bright)

RESPONSE:

Comment is noted.

109.

COMMENT:

On Draft Master Plan page III-4, item No. 2, "Proposed Land Management Program, Dune and Shorefront Protection Act," I believe that the State already has an existing land management program. The Coastal Area Facility Review Act, the Wet Lands Act, and the Waterfront Development Permit Program have already limited what the public or private sector can do in these areas. (William T. Birdsall, The Birdsall Corporation)

RESPONSE:

The above referenced acts are generally in application in the immediate area of the open beach shorefront.

110.

COMMENT:

The requirements of the Dunes and Shorefront Protection Act appear to be well founded and worthy of implementation. However the one provision prohibiting new development or redevelopment of property that has been damaged more than 50% of it fair market value is objectionable and understandably controversial among the shore communities. Since this is a very broad based provision with serious economic and public opinion provisions, it would be preferrable to set that policy determination aside to be addressed in public hearings related to the Dunes and Shorefront Protection Act while putting proper emphasis on the implementation of storm erosion mitigation projects requiring immediate attention at the State level. (Michael Ingram, Atlantic City Engineering Department)

RESPONSE:

Comments are noted and appreciated. The proposed legislation was the subject of two legislative public hearing.

111.

COMMENT:

A major concern regarding the recommendation of the draft Plan is its heavy reliance on the proposed Dune and Shorefront Protection Act as a means to regulate land use in the coastal portion of the State, especially the barrier beaches. The Board of Chosen Freeholders was unalterably opposed to the initial Dune and Shorefront Protection Act, Assembly bill A-1825 and has substantial reservations concerning the revised bill drafted by the Honorable Robert P. Hollenbeck, Assemblyman. The County of Ocean will not accept any program of shorefront protection that has at its base the original Dune and Shorefront Act, A-1825. (Leonard T. Connors, Jr., Ocean County Freeholder Director)

RESPONSE:

Comment is noted. The Final Master Plan recognizes the importance of land use management as a shore protection tool, and commits the DEP to pursue that goal on the local and state level. The proposed legislation is not an element of the plan, however.

112.
COMMENT:

The League of Women Voters of Monmouth County's 10-year-old position in regard to barrier beaches (and by inference the ocean shore) states that present and future development of barrier beaches should be directed toward preservation and restoration of natural features such as protective dunes, vegetation and marshes. The littoral current should be used to advantage to rebuild beaches with decreasing use of devices such as groins that interfere with its natural function. "With this viewpoint in mind, it is evident that the League approves the Dames & Moore recommendations that support a strong Dune and Shore Protection Act. We go along with the idea that a building 50% destroyed should not be replaced, but it seems obvious that some provision for compensation presumably, the owner would still have to pay taxes after retreat of the flood tide." (Kathleen H. Rippere, National Resources Chairman League of Women Voters)

RESPONSE:

Thank you for supporting the Draft Master Plan recommendations. Property owners would be compensated for lost structures by the National Flood Insurance Program and the remaining land would be taxed at post-storm rates.

113.
COMMENT:

The Draft Shore Protection Master Plan for the State of New Jersey is supposed to be a draft providing the "proposed framework" for shore protection measures. A framework study should be limited to suggesting broad areas for legislation, not endorsing a specific bill. Moreover, if the Department of Environmental Protection is supposedly open to suggestion and discussion of the draft, why then has it already drafted and moved a specific bill of such far-reaching proportions? (Robert D. Halsey, Monmouth County Planning Board)

RESPONSE:

The Shore Protection Master Plan is intended to be a multi-faceted approach to a complex situation. As such, it considers coastal engineering, land use regulation, land acquisition, public education, and federal policies and programs in terms of their possible benefit to New Jersey's shore.

114.
COMMENT:

I am writing to express my views regarding the proposed Draft Shore Protection Master Plan as it affects Sea Isle City, N.J. According to the recommendations of this Plan, I strongly object to the proposal that the State establish and regulate a zone that would prohibit the rebuilding of a structure damaged by storm by more than 50 percent of its fair market value. Furthermore, I cannot agree with the discussion of possible post-storm acquisition of land mentioned in the Plan as a solution to beachfront erosion. Apart from reducing available tax ratables and shrinking our tax and economic base, I do not subscribe to the philosophy of retreating from the islands and allowing those post-storm acquisition areas to return to a natural state. (Hon. Andrew J. Bednarek, Commissioner, Sea Isle City)

RESPONSE:

Comments are noted. Post-storm acquisition is, however, an established Federal policy and has been used in Massachusetts and Rhode Island.

115.
COMMENT:

The Draft Master Plan's encouragement of the passage of the Dune and Shorefront Protection Act is both appropriate and commendable. NRDC strongly supports the passage of effective legislation to control development in hazardous coastal areas and provide conditions in which natural shoreline processes can function. However, we believe the Plan can and should go further in achieving the objectives of wise coastal land use than solely promoting the DSPA.

Under the CMP the Department of Environmental Protection could delineate and map hazard areas and begin immediate implementation of a limitation on new development covered by the Coastal Area Facility Review Act. Additionally, under the CMP, the DEP could prevent extension of infrastructure which would encourage development in hazard areas both through direct regulation and the exercise of state and federal agency consistency. These steps would be consistent with Section 7:7E-3.21 of the CMP and add specificity to the policy which discourages "activities that adversely affect the natural functioning of the beach and dune system." (Gary Grant, Natural Resources Defense Council)

RESPONSE:

These are the policies and plans of the DEP.

116.
COMMENT:

Of course, we have a major objection to the same provision that many others have previously objected to; namely the provision that if shorefront dwellings are destroyed or their value is diminished by over fifty percent by natural storm-related causes they cannot be rebuilt. This provision is not only confiscatory, but also flies in the face of overwhelming public sentiment on this issue. The Draft Plan assumes that legislative bill A-1825 will be enacted into law in its original form. In fact, at the present time, the original version of A-1825 has been withdrawn by the sponsor and substituted by another bill which deletes the fifty percent no rebuild provision. The legislation was withdrawn by the sponsor while it was still in the Committee of which he is the chairman. This was due to almost unanimous public reaction against the original legislation at two hearings in shore communities. The attempt to implement the fifty percent no rebuild provision through the Shore Protection Master Plan is a clear unsurpation of a legislative function by an adminstrative agency, particularly so when given the history of A-1825. (David Fisher, N.J. Builders Association)

RESPONSE:

There has been no attempt to implement a "50% provision" through the Shore Protection Master Plan. A-1825 was simply a land use management alternative which the DEP favored. There will be no attempt to implement it absent of legislation.

117.
COMMENT:

WHEREAS, after careful review, the Mayor and Council of the Borough of Avalon vigorously oppose the implementation of the Draft Master Plan as:

The Master Plan endorses the Dune and Shorefront Protection Act, which the Borough of Avalon has previously found to be not practical, an unsurpation of local government control and management of their beaches and dunes, as well as an unsurpation of the power of local planning and zoning, as well as being unconstitutional and confiscatory. (Philip Jodyski, Borough of Avalon)

RESPONSE:

Comments are noted.

118.
COMMENT:

I understand that after the effective date of this Act, no person owning land within the shorefront protection area can contract to sell without giving the State the right of first approval on this property. This means that the State may buy these beachfront properties and thus remove them from the tax rolls as ratables. This will increase the tax rate even if town spending is not increased.

Also, I strongly object to the powers being given to the Commissioner of the Department of Environmental Protection in Sections 4, 5, 7 and 13 of this Act.

Section 4 requires towns to adopt a Model Shorefront Protection Ordinance, which must be approved by the Commissioner. If he does not approve, the Commissioner has the right to write an ordinance for the town. I believe that this is a violation of "home rule" in the worst way.

Section 5 gives the Commissioner the right to revise dune lines, dune areas and shorefront protection areas to where he feels they should be located. I feel that something of this importance should be handled by the Legislature.

Section 7 states that the Commissioner shall adopt, amend or repeal rules and regulations to effectuate the purpose of this Act. I think that this should also be the responsibility of the Legislature.

Section 13 gives the Commissioner the right to construe liberally the purpose of this Act. If Section 3g is liberally construed, the Department of Environmental Protection could regulate all Bayfront areas.

For these reasons, I am opposed to this Act, and I have written to my State representatives asking their help in preventing this bill from being passed. (Darry N. Copeland, Cherry Hill; Hugh McCullough, Stone Harbor)

RESPONSE:

Comments are noted.

119.
COMMENT:

I came across a section that said that if a structure was damaged more than 50 percent of its market value, it can't be rebuilt. I can't say what I think is says because even today a structure that may be more than 50 percent destroyed, you can't use that formula in the courts today. (State Senator Brian Kennedy, District 10)

RESPONSE:

Comment is noted.

120.
COMMENT:

The Hollenbeck Bill is the biggest land grab bill in any bureaucratic agency in any state ever, short of the Pinelands Bill, this Master Plan and that plan of Mr. Hollenbeck. (Assemblyman Anthony Villane, District 10)

RESPONSE:

Comment is noted.

121.
COMMENT:

Why does the Draft Plan rely so heavily on the dunes legislation which has not passed yet? What will you do if, in fact, another bill is passed, and what will happen to the Shore Master Plan if it, as it seems fairly obvious, is amended or there is no bill at all? (Assemblywoman Hazel Gluck, District 9)

RESPONSE:

The thrust of the final Master Plan is the specific engineering plans for each reach and the use of existing legislation and programs.

122.
COMMENT:

The proposed Dune Act in the Shore Protection Act as contained in the Draft Shore Protection Master Plan is unacceptable. We believe that the same principle which we demand of the State's proposed pinelands plan must form the basis for any shoreline protection plan. By these, I refer to local participation, equitable treatment of our land owners, no formal land acquisition, and fair compensation for any land acquired. (Charles Worthington, County Executive Guarantee Trust Building)

RESPONSE:

Comment is noted.

123.
COMMENT:

The Dune and Shorefront Protection Act is resurrected as a major component of the Shore Protection Master Plan after citizens protested the bill. (Ken Smith, Long Beach Island Chapter, Citizens for Local and Intelligence Control)

RESPONSE:

The Act is not a component of the final Plan.

124.
COMMENT:

My greatest disappointment with the plan and I believe its fundamental drawback stems from the fact that plan incorporates the proposed Dune and Shorefront Protection Act as the backbone for regulatory control without thoroughly evaluating either the impact of its provisions or other alternative regulatory schemes.

No economic data supporting such alternatives is even considered in the study. Instead, the plan focuses on the cost savings to the State associated with post-disaster acquisition. (Alfred Scerni, Director of District Office Operations for U.S. Congressman William J. Hughes)

RESPONSE:

Although the proposed Dune and Shorefront Protection Act is no longer being considered, there was an economic analysis performed on various impacts of the Act. It appeared in Chapter V of the Draft Master Plan and Volume 2, Chapter V of this document.

125.
COMMENT:
We object to the proposed Dune and Protection Act, especially the provision which would prevent the reconstruction of any structure which is damaged within the coastal erosion hazard and resource area. This provision would create economic hardship upon the citizens of Ventnor City. (Robert E. Bos, Ventnor Engineer)

RESPONSE:
Comment is noted.

126.
COMMENT:
The recommendation to prohibit reconstruction if damage exceeds 50% of fair market value is not only unfair, but appears to be an unconstitutional taking without compensation. A similar type of provision, common in many older zoning ordinances in New Jersey has already been struck-down in the courts. (Robert D. Halsey, Director County Planning, Monmouth Co.)

RESPONSE:
Comment is noted.

127.
COMMENT:
In reference to some of the policies of the State, or the proposed policies of the State, policies set forth in the first Dune Bill, and duplicated in the Master Plan, let me say I am against the taking of lands from any private individual, corporation, partnership, etc. without the owner or owners being fully compensated for such lands at a fair market value; not a value predicated on a Storm Law situation, or an artificially contrived depressed value. Such as sly, cunning, deceitful tactics which could be utilized by unscrupulous bureaucrats and politicians to, in plain words, try to acquire lands for the State without proper reimbursement to the owners.
Such phrases as "environmentally sensitive," "flood hazard," "dune area," "back to the first paved road," are in my mind colusion and cohersion and subterfuge, to acquire lands for next to nothing. (Dr. Andrea Lippi, Somers Pt.)

RESPONSE:
Comment is noted.

128.
COMMENT:
You've also been attacked for the Dune Act. I think in Cape May County you have some examples of that where that Act might work. I refer particularly to Bay Shore Village where a developer was destroying an ancient dune. We received many calls on this, but there is no legislation. In fact, there's nothing that anybody in the local zoning boards or the county planning board can apparently do to prevent this. Therefore, we would show our support for state control. (Ruth Fisher, Cape May Citizens Group)

RESPONSE:
Comment is noted.

129.
COMMENT:
Lastly, give up the controversial and confiscatory Dune and Shorefront Protection Act and, instead, work in partnership with us as we were led to believe would be the case with the passage of the 1977 Shore Protection Bond Issue. (Assemblyman James Hurley, District 1)

RESPONSE:
Comment is noted.

130.
COMMENT:
While it is recognized that regulation of coastal land is both desirable and necessary, the Dune and Shorefront Protection Act contained in the draft Master Plan is highly objectionable. It is recommended that this aspect of the Master Plan be considered independently and be the subject of further public hearings, in order that various projects recommended in the Plan can proceed at the earliest date. (J. Thomas Wood, Borough Engineer, Egg Harbor)

RESPONSE:
Comment is noted.

131.
COMMENT:
We object, however, to the proposed Dune and Shorefront Protection Act, which is unacceptable in its present form. Atlantic County Government, in conjunction with representatives of the municipalities of Ventnor, Margate, Longport and Atlantic City, feels that this section should be deleted from the Master Plan and treated as a separate entity. (Charles D. Worthington, County Executive, Atlantic City)

RESPONSE:
Comment is noted.

132.
COMMENT:
Our basic recommendation on the land management provisions are that the Dunes and Shorefront Act has a very controversial provision in it. Perhaps, this can be worked out to a more satisfactory arrangement. We find that most of the people we have spoken to that are concerned with companies support it. When it came down to the fee of 50% construction and reconstruction, it is highly controversial. We could recommend that that portion of the Plan be set aside until it has has adequate time for addressing — readdressing, correction — et cetera; and that it not hold up the communities that now need the dollars to go ahead on what we consider to be a very viable project. (Michael Ingram, Atlantic City Engineer)

RESPONSE:
Comment is noted.

133.
COMMENT:

Specific suggestions for Assembly, Bill No. 2228 are: 1) 2a line 30 add words to the effect, "The Legislature recognizes that while movement is integral to the nature of a barrier island or a barrier beach and that any action that prevents such movement is ultimately a factor in the beach's destruction, many sections of New Jersey's beaches have been legally developed for many years. Every possible effort shall be made — on a section-by-section basis — to provide for an orderly retreat from the natural forces at work to permit beachfront property owners to enjoy the use of their property for as many years as possible." 2) Page 6 — line 40, add, "In sections of the beachfront that are essentially developed — the construction of new, legal structures, subject to applicable State or Federal laws, rules and regulations pertaining to building in flood plain areas." 3) Page 10, paragraph 2 near the bottom of the page: Modify "Within dune areas" to permit new construction in essentially developed areas; 4) Somewhere in the Bill provide for a requirement that a new structure or the replacement of an old structure — say 75% destroyed — must be set back of the projected Active Zone. In the case of rebuilding of an old structure, I believe that it would be preferrable to have it replaced in a safe location rather than rebuilt in an unsafe one. (Ross Pilling, Mantoloking)

RESPONSE:

We suggest that you contact the legislative sponsors of the bill with your suggestions.

H. LAND ACQUISITION

134.
COMMENT:
I cannot agree with the discussion of possible post-storm acquisition of property recommended in the Plan as a solution to beachfront erosion in the Townsend Inlet section of Sea Isle City. I do not subscribe to the philosophy of retreat from the islands and allowing targeted post-storm acquisition areas to return to nature. (Mary Macfarlane, Sea Isle City)

RESPONSE:
Comment is noted.

135.
COMMENT:
Post-storm land acquisition should provide just compensation, at fair market value to property owners. (Elwood Jarmer, Planning Director, Cape May County; Robert D. Halsey, Planning Director, Monmouth County; Phillip Judyski, Avalon; Dr. Andrea Lippi, Somers Point)

RESPONSE:
The recommended pre- and post-storm acquisition programs do provide for compensation to affected property owners. The cost of acquiring large barrier island parcels would be very high so the location and extent of acquisition in any given year would be dependent on the funds available.

136.
COMMENT:
The Shore Protection Master Plan should include a detailed program for acquisition; including funding sources, a site specific economic and environmental analysis, and a priority ranking of sites and a strategy for submitting funding proposals and carrying out land purchases. (Paul Dritsas, American Littoral Society; Gary Grant, Natural Resources Defense Council)

RESPONSE:
The cost and optimum location for post-storm land acquisition cannot be accurately estimated prior to actual storms. The amount of property affected, post-storm land values, and salvage values of damaged structures will be a function of the storm intensity, the area affected, and the type and intensity of development within the impacted areas.

To ensure timely implementation of the land acquisition option, priority guidelines and definitive funding strategies should be established by the State before the next major storm. Identification of appropriate post-storm acquisition target areas in the Draft Master Plan was the first step in this process. It is expected that acquisition funding would primarily come from existing State and Federal programs, such as Green Acres and the National Flood Insurance Programs, or new Federal programs related to pending barrier island legislation. The location and extent of acquisition in any given period of time will be primarily dependent on available funds.

Due to the uncertainty in predicting when severe storms will occur and what areas will suffer substantial destruction, detailed cost and impact assessments for candidate sites would be more appropriate in a case-by-case evaluation at the time a particular land parcel is being considered for acquisition.

137.
COMMENT:
The pre-storm acquisition of shorefront property is a nonstructural measure which is consistent with existing Federal policy as specified in the Water Resources Council "Principles and Standards." Under this policy, the Corps of Engineers may cost-share in pre-storm acquisition or any nonstructural measures if it meets four tests —acceptability, economic efficiency, effectiveness, and completeness.

The rationale for post-storm acquisition of barrier island tips is noted. However, this measure appears to be contrary to existing Corps of Engineers policy since a uniform level of protection would not be provided for the entire project reach, thus violating the latter test referenced in the preceding paragraph. (D.J. Sheridan, U.S. Army Corps of Engineers, Philadelphia District)

RESPONSE:
Post-storm acquisition of barrier island parcels is recommended as a means of reducing future property losses that would result from repeated redevelopment in high hazard areas. This alternative will not reduce short-term losses ("protect") existing development from destructive storms or gradual erosion. Thus post-storm acquisition is not shore "protection" per se but is an approach for reducing future hazard loss potential. Additionally, future expenditures for engineering works for shore protection would be reduced in acquired areas. Although this alternative would be useful in reducing hazard losses over an entire barrier island reach, it would not be feasible due to the prohibitive costs and significant political and social impacts that would be involved.

138.
COMMENT:
Acquisition areas should include only the most hazardous areas, undeveloped areas, or dynamic tips of islands adjacent to inlets. (Paul Dritsas, American Littoral Society; Gary Grant, Natural Resources Defense Council; Robert D. Halsey, Planning Director, Monmouth Co.; Winifred Meyer, American Association of University Women; Robert Latorre, Publicity Director, Seaside Hts.)

RESPONSE:
Working with very limited funds, any potential acquisition areas would be carefully reviewed. Although DEP agrees with the comment generally, the pattern and extent of storm damage would naturally influence the potential choices for acquisition.

139.
COMMENT:
We agree that the regulated zone should be defined by existing beach and dune areas and by erosion hazard areas, probably going beyond the nearest highway in a number of places. (Kathleen H. Rippere, League of Women Voters)

RESPONSE:
Thank you.

140.
COMMENT:
Although wise land use and its regulation are of primary importance, they must be augmented for the short run presently for the status quo by engineering programs which will hold the line on erosion and correct it where possible emphasis should be put on nonstructural methods such as beach nourishment, intertidal vegetation and dune stabilization. (Winifred Meyer, American Association of University Women)

RESPONSE:
Agreed. The continuation of the State's coastal engineering programs, particularly nonstructural ones, is an important component of the New Jersey Shore Protection Master Plan.

141.
COMMENT:
The Master Plan should evaluate the use of Beach and Harbor Bond Act (BHBA) funds for its acquisition program. Section 4 of the 1977 Act states that funds should be used for the "purposes of researching, acquiring, developing, constructing and maintaining beach and harbor restoration maintenance and protection facilities, projects and programs." (Gary Grant, Natural Resources Defense Council)

RESPONSE:
It is the opinion of the DEP that the Beaches and Harbors Bond Act funds were not intended for acquisition of large parcels of land for the purpose of controlling shorefront redevelopment or new development; but rather the Act allows for acquiring lands or easement required for implementation of coastal engineering programs. Moreover, the Bond Act does not include sufficient funds to purchase significant amounts of shorefront land. Funds for land acquisition would primarily come from existing State or Federal programs such as Green Acres and the National Flood Insurance Program, or new Federal programs related to pending barrier island legislation.

142.
COMMENT:
I believe that once developed areas have been destroyed, taxpayers have no obligation, through any kind of public funding, to pay for their rebuilding. (Mary H. Owen, West Long Branch)

RESPONSE:
DEP agrees. However, Federal tax dollars subsidize programs of disaster assistance and national flood insurance in coastal areas. Also the Internal Revenue Service allows tax deductions for losses resulting from natural disasters. Through a combination of tax deductions and federal disaster assistance, an individual with an uninsured flood loss could pay as little as 5-10 percent of the cost of the loss. Thus, there is no incentive for homeowners or businesses to relocate from high hazard areas after devastating storms such as the March 1962 storm.

143.
COMMENT:
"Due to the prohibitive costs and significant political and social disruption, acquisition of entire islands or coastal high hazard areas is not feasible as a means of coastal hazard migration." I don't know what that means. (Robert Latorre, Publicity Director, Seaside Hts.)

RESPONSE:
Purchase of large shore land areas, such as entire barrier islands, is not feasible as a land management alternative due to the high cost and disruption that would result in people's lives.

144.
COMMENT:
Shorefront areas must become public property at a steadily increasing rate. Bailing people out who live in high-risk areas is too costly for any government to bear. People must know that they live in or are purchasing in a high-risk area. (Kathleen Rippere, League of Women Voters)

RESPONSE:
Comment is noted.

I. ENGINEERING PROGRAMS

145.
COMMENT:
The engineering alternatives presented in the Master Plan would protect the resources and property in the short-term while avoiding the enormous expenses in the past that have attempted to delay the unavoidable migration of the shoreline. This approach shows a progressive vision on the part of the State that will enhance property values and the safety for residents in the long run, while conserving limited Federal and State funding. (William Matuszeski, U.S. Department of Commerce, NOAA/OCZM)

RESPONSE:
Thank you for your support of this plan.

146.
COMMENT:
No location is given for possible sand sources. Draft Master Plan Figure IV B-3 shows no borrow areas within reasonable pumping distance of Absecon Island (Reach 9). (Robert Bos, City Engineer, Ventnor)

RESPONSE:
Volume 2, Table VI.A-1 lists locations of reported sand borrow areas for Absecon Island offshore of Little Egg Inlet and in the backbay area west of Longport. The location of the offshore sources are shown on Volume 2, Figure VI.A-2. Although transfer of sand from inlets and backbay areas would probably be accomplished through hydraulic dredging and pipeline pumping to shorefront areas, this method would not necessarily be utilized for offshore borrow sources. In these cases sand may be transported by hopper dredge or barge to pumping facilities close to the beaches receiving renourishment. From there the sand can be transferred via floating or submerged pipelines to the beach. For example, a recent beach fill project on Rockaway Beach, New York required the transport of sand by barge and pipeline over distances of up to 11 1/2 miles (Nersesian, 1977).

147.
COMMENT:
No proposed beach profile has been presented. This makes an effective analysis of the proposed beach section very difficult. (Robert Bos, City Engineer, Ventnor)

RESPONSE:
Typical beach profiles are described in Volume 2, Section VI.A-1, Rational and Assumptions for Design. Typical design beach profiles have been included schematically in Volume 2, Figure VI.A-1. Detail beach profile designs will be developed during reach specific design phases prior to construction of reach engineering programs.

148.
COMMENT:
The location of immediate fill areas and the location of proposed feeder beaches has not been shown. (Robert Bos, City Engineer, Ventnor)

RESPONSE:
Details of engineering designs selected for implementation are to be developed in later preconstruction design studies. At that time up-to-date data will be collected and evaluated and detailed construction plans and specifications will be prepared.

149.
COMMENT:
We also question the feasibility of attempting to employ the recommended amount of beach replenishment. In several studies an increasing shortage of sand available for such purposes has been noted. This is supposedly due to the fact that in this State, rivers empty into estuaries rather than into the sea directly. It is also due to the mining of sand from the ocean floor for inland construction and the loss of cliffs and dunes that originally provided beach material. It is going to be not only extremely costly, but, possibly, impossible to obtain sufficient amounts of the right grain of sands. One beach in Sea Bright has to be replenished every one to three years and, invariably, winter storms wash the sand back to sea, since there are no dunes present to hold it. (Kathleen H. Rippere, Natural Resource Chairperson, League of Women Voters)

RESPONSE:
Beach erosion is partially the result of a deficiency of sand supplied from rivers and eroding headlands. However, this shortage of supply does not affect the quantity of sand available in offshore borrow areas which are recommended for use in the proposed beach nourishment programs. Offshore areas identified by the Corps of Engineers contain nearly 2.9 billion cubic yards or sand suitable for use in beach nourishment. This is more than adequate for purposes of the Master Plan programs. The estimated costs of the proposed beach nourishment projects are based on use of offshore borrow areas and are generally consistent with recent project costs experienced elsewhere in the United States.

Beach nourishment is only a temporary measure against beach erosion. However, the selection of suitable fill material, based on evaluation of sand grain size distributions, can prevent the accelerated loss of beach under normal conditions. Such studies are recommended (see Volume 1, Chapter III) for implementation of the proposed engineering projects.

The excessive beach losses at Sea Bright are likely to be related to the grain size characteristics of the fill material and not to the absence of dunes. Dunes can act as reservoirs which supply sand to beaches under storm erosion conditions. However, the dunes do not provide any additional stabilizing influence which "holds" sand on the beach.

150.
COMMENT:
Page I-7. The proposed Corps of Engineers multi-purpose projects which include inlet stablization provide for sand bypassing to prevent adverse effects on downdrift beaches. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:
The document text has been corrected as noted.

151.
COMMENT:

On page ES-2 of the Draft Master Plan, under the article "Findings," the sixth finding is misleading in that it reads that all engineering projects along the shore line have resulted in losses and damage whereas this is only true in the case of bulkheads and seawalls. (William T. Birdsall, Birdsall Corporation)

RESPONSE:

The referenced finding clearly keys in on shore parallel structures, such as bulkheads and seawalls, as the problem. However, jetties and high profile groins which act as littoral barriers have also resulted in anomalous beach losses along the New Jersey shore.

152.
COMMENT:

A review of all beach nourishment projects in New Jersey to date reveals the following:

a. The project was a one-shot fix.
b. The area "fixed" was fairly local.
c. The materials used were not primarily chosen for beach stability.

If beach nourishment is to become a major priority item in shore protection, why not consider it in conjunction with a structural complex of fixed pumping plants and a permanent distribution pipeline complex placed under the fore-dune ridge or boardwalk/seawall of critical erosion reaches.

This distribution pipeline would be sufficient diameter with spaced access points for tapping off the sediment/water slurry onto the beach face to maintain several miles of the island which is served by it.

A temporary analogue to this concept was used during the 1979 beach fill project on Long Beach Island when 3 miles of front was nourished from a 28" pipeline which was gradually extended as the fill was emplaced.

The source of this sand

The dredging of New Jersey inlets has used the three major types of machines in a poorly matched overall plan of sand recycling.

The hopper dredge hydraulically mines sand discharging the slurry within its hold. The filled dredge must travel into deeper water to discharge its load via opening bottom doors. This precludes using the sediment on beaches. Hundreds of thousands of cubic yards of usable beach sediment have been lost offshore this way.

The side casting dredge ejects the hydraulically mined sediment out of the channel and allow it to resettle "out-of-the-way." This is not often used in New Jersey.

The pipeline dredge pumps the sediment in pipe to a spoil disposal site and discharges it to settle. This method has been used increasingly frequently since 1960 to supply suitable material to nearby eroding beaches. However, for the most part these machines are low capacity, old, calm weather only, barge mounted dredges not capable of economically reaching offshore inlet shoals or offshore marine sources of beach sand.

An idea: Design and build a large capacity, seagoing dredge capable of excavating and pumping to a fixed, permanent discharge pipeline on land 2500 cubic yards of sand per hour.

The dredge, permanently assigned to New Jersey, would be responsible for navigational dredging of inlets discharging sediment to the land based system near the inlet.

Example — Manasquan, Shark River, Absecon Inlets.

In addition this vessel could also go to designated offshore sediment sources and using either permanent, sub-bottom discharge lines at a large deposit site or temporary lines, transfer sand to the nearest on-shore distribution systems.

My opinion is to think regional, and think big. Fixed structures and barriers have not solved the problem — and — more of them will not cost any less than the above plan. Clearing the barrier island of people will never be realized even if a major storm did 100 million dollars in damage each and every year.

This concept of high capacity modern dredges seems to work for the German North Sea-facing barrier islands. I would propose a serious design and implementation study of such a concept on New Jersey's coast. (Dr. Stewart C. Farrell, Stockton State College)

RESPONSE:

A system of fixed pumping plants and permanent pipelines has been considered in Appendix F of the Draft Master Plan (see Volume 2, Chapter VIII). The piped system proves to be about 2.3 times as costly as a conventional nourishment scheme using offshore sources over a 50-year project life.

Your comments regarding a large capacity dredge permanently assigned to New Jersey are noted. A detailed assessment of the costs of such a program would be needed to compare its feasibility to that of contracted dredging on an as needed, project specific basis. Also, the State's taxpayers would have to be willing to commit to a long-term capital intensive shore protection program.

153.
COMMENT:

On Draft Master Plan page ES-3. Beach nourishment projects are not considered by the Corps of Engineers to be a nonstructural alternative. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:

The differing classifications are noted but DEP considers beach nourishment to be a nonstructural shore protection measure and defines it as such in the New Jersey Coastal Management Program (NOAA/NJDEP, August 1980)

154.
COMMENT:

Page I-2. Financial assistance by the Corps would be based on cost-sharing between Federal and non-Federal interests. Reimbursement of Federal costs for approved advance construction by the State is part of the existing cooperative agreements and would occur when project construction is initiated. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:

Text changes have been made as suggested.

155.
COMMENT:
Page I-29. The structures at Townsend and Hereford Inlets were constructed by the State and local municipalities, and were not installed under Corps of Engineers inlet stabilization programs. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:
The text has been corrected as noted.

156.
COMMENT:
Page II-13. Turtle Out Inlet should be changed to Turtle Gut Inlet. Under the remarks for Cape May Inlet the statement should be changed to "Artificially stabilized with jetties constructed during the 1908-1911 period." (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:
The referenced table has been corrected as noted.

157.
COMMENT:
Page IV-12. The low-profile groins proposed by the Corps of Engineers are not designed to trap littoral material but to retain beachfill material placed on restored beaches. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:
The generic discussion of groins contained on the referenced page indicates that groins can be designed to build protective beaches or to retard erosion of restored beaches. The concept of a low-profile groin is endorsed by this Master Plan which seeks to avoid major barriers to littoral drift. As an example, the plan proposes notching or otherwise modifying several high-profile groins in Monmouth County to reduce their littoral barrier effects.

158.
COMMENT:
Pages VI-24, 30, 32 and 40. Beachfill maintained with periodic nourishment is recommended as the engineering plan for reaches 7, 9, 10, and 12. The locations of initial beachfill sources should be identified in the text. Also, the method of periodic beach nourishment, i.e., feeder beach, sand bypassing at inlets, or direct placement from offshore etc., should be presented in the discussions and illustrated on the accompanying figures for each reach plan. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:
Likely beachfill sources for each reach have been identified in Volume 2, Table VI.A-1. The cost estimation for each engineering project is based on utilization of these offshore sources which is the recommended approach. Details on project implementation, such as specifics on offshore borrow sources and beach nourishment procedures, will be developed during reach specific pre-construction detailed studies.

159.
COMMENT:
Page V-7. The referenced House Documents for the fourth priority group were not accomplished pursuant to the New Jersey Inlets and Beaches Cooperative Study. The report for this group study was completed in July 1978 and has not been printed as a House Document. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:
The document text has been corrected as suggested.

160.
COMMENT:
Page V-16. The departure in beach user area criteria from that of the Corps is correctly noted in the Master Plan. However, this change will result in considerable additional construction cost with little or no increase in benefits. This would possibly result in the deletion of economically viable projects from the listing of recommended plans. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:
Early in the Master Plan Study Program the DEP elected to use beach user area criteria recommended in the New Jersey SCORP. The SCORP criterion for beach user area is larger (100 square feet per person) than is normally used by the Federal Government (75 square feet per person). An example comparison of the economics of the two criteria, provided in Table VII.E-1 of Volume 2, Chapter VII, shows that use of the smaller beach area criterion for the recreational development alternative at Peck Beach results in about a 10 percent improvement in the benefit/cost ratio. However, the shift in the ratio is dependent on the reach and alternative considered. In fact, the benefit/cost ratio will decrease in some cases. This occurs for certain storm erosion protection alternatives (predetermined berm widths) and recreational development alternatives where berm expansions are not recommended. In these cases, engineering costs and property protection benefits would not be changed using the Federal criterion. In the Master Plan benefit/cost analysis, no recreational benefit (additional beach users accommodated) is taken for added beach capacity in excess of projected beach user area demand. Using the lower beach user area criteria, user area demand would be decreased as would the allowable recreational benefits. Corresponding decreases in public service costs (related to additional beach users accommodated) will offset the decrease in recreational benefits to some extent. Ultimately the recreational benefits decrease relative to the engineering costs and a lower benefit/cost ratio results.

161.
COMMENT:

Page V-19. The use of carrying capacities of major access routes to each reach is an extremely simplistic approach to estimate upper limits on recreation demand. From a practical standpoint this parameter should be estimated on a reach basis by considering infrastructural capacity limitations such as housing, parking and future development potential. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:

The consultant evaluated possible approaches to assessing upper limits on recreational demand, including the approach used by the Corps. It was concluded that certain infrastructural capacity limitations that exist today may change over the short-term (e.g., mass transportation options such as beach shuttles can alleviate parking problems and accommodate more beach users). For the purpose of assessing the feasibility of conceptual reach designs on a statewide basis, within time and budget constraints of the Shore Protection Master Plan Study, the method specified in the Draft Master Plan was considered appropriate. Refinement of upper demand limits would be more appropriate during reach specific preconstruction design phase studies. Thus, the approach detailed in the Master Plan was used and recreational alternatives were designed in such a way as to satisfy projected (anticipated) recreational demand by phased (10-year intervals) increases in beach width at selected areas. This approach also allows for adjustments in design beach width increases where the State determines that recreational demand growth does not materialize as anticipated, or where infrastructure constraints limit use growth.

162.
COMMENT:

Page V-44. The use of a State average unit opportunity cost is not appropriate since recreational opportunities, accessibility, and environmental quality vary by reach. Consideration should be given to developing a unit day value for each reach based on the procedure presented in Appendix 3 to Subpart K of the Water Resources Council's "Procedures for Evaluation of National Economic Development (NED) Benefits and Costs in Water Resources Planning (Level C)." (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:

The NED methodology approximates a unit opportunity cost (unit day value) for a particular beach depending on judgment of various considerations such as recreational opportunity, accessibility, and environmental quality. In review of the methodology, the consultant found the methodology to be inappropriate for the Master Plan reach level alternative feasibility studies due to the following factors:

- Assigning various quality factors to a particular beach (or reach) does not take into account the possibility that such factors could change considerably over the short-term. An example is the recent development in Atlantic City and Long Branch where the quality of facilities and accessibility have undergone dramatic changes in the last 5 years;
- The methodology does not take into account the fact that implementation of a particular engineering project would result in improved recreational opportunity, accessibility, and environmental quality; and thus a higher unit day value than is currently appropriate; and
- The method of assessing various factors is somewhat subjective — thus two different people could get two different unit opportunity costs for the same beach.

In light of the factors above, the $2.00 average opportunity cost was utilized statewide to avoid biassing the results of the cost/benefit analysis. For a sample calculation at Peck Beach (Reach 10), the resulting $1.93 unit opportunity cost derived from the NED methodology verified that the $2.00 average value is reasonable for the level of detail appropriate in the master planning process. As with any of the criteria used, the cost/benefit analysis for any reach could be fine tuned in the reach specific design phase prior to project implementation.

163.
COMMENT:

Page V-57. The Corps pre-construction planning program includes the final engineering and design for the project, Congressional authorization for construction, and preparation of plans and specifications. This process normally takes 4 to 5 years. Appropriate changes should be made to the last paragraph on referenced page. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:

The document text has been corrected as noted.

164.
COMMENT:

Page D-1. Dredge and fill permits in 2nd paragraph should be changed to regulatory functions (permits) program. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:

Appropriate text correction has been incorporated.

165.
COMMENT:

Draft Master Plan Appendix E — Additional details should be presented for cost estimates, i.e., location of borrow areas, unit cost, mobilization and de-mobilization costs, contingency allowances, and engineering and design costs. Without this level of detail, one cannot objectively review this section of the Master Plan. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:

Due to the overwhelming quantity of detailed calculations generated in the analyses of alternative engineering plans, it is not practical to include all of this information in the Master Plan document. To do so would involve another volume the size of the Draft Master Plan. Instead only summaries of the results and selected examples have been provided.

Volume 2, Table VII.B-1 shows an example of the computation of conventional nourishment schemes using offshore borrow areas. The unit cost, mobilization/demobilization and allowances for contingencies, engineering, design, supervision and administration are taken as constants for all reaches. The location of borrow areas is shown in Volume 2, Figure VI.A-2.

166.
COMMENT:
Appendix F. It is unclear from the discussion if a comparison of beach nourishment schemes was accomplished for all other study reaches in addition to the cited example. The results of such an analysis should be summarized in a table so the reviewer can determine the most economical method for each reach. (D.J. Sheridan, Army Corps of Engineers, Philadelphia District)

RESPONSE:
The detailed cost comparison of nourishment schemes was only performed in entirety for Reach 4 (Belmar to Manasquan). Since other reaches have comparable or longer ocean frontage, the pipeline recycling system would have higher total costs due to the requirement for booster stations and additional equipment. Likewise the dredge/barge recycling system would also experience higher unit costs due to longer transport distances. Sand bypassing at Shark River Inlet is a possible partial nourishment scheme for Reach 3 (Long Branch to Shark River Inlet). The costs for this system also appear to be higher than conventional nourishment as in the Reach 4 detailed example. A cost comparison of the conventional nourishment scheme and the sand recycling by dredge/barge system was done for all of the oceanfront reaches. That comparison has been summarized in a Volume 2, Chapter VIII of the final document.
In short, conventional nourishment appears to be the most economical scheme for all oceanfront reaches.

167.
COMMENT:
Reference to the using of suitable dredging materials from the inland waterways is good, and I intend to introduce legislation to make this mandatory as long as the dredging material is suitable and unspoiled. (Senator Brian Kennedy, District 10)

RESPONSE:
Thank you.

168.
COMMENT:
We heartily approve continued dune nourishment along the southern shore. We feel that these dunes should not be created in a straight line, but should be irregular in size, shape and placement and backed by a series of secondary dunes. In North Carolina, apparently straight lines of dunes acted almost as a seawall without providing the flexibility of natural dunes. This does not appear to be recognized in the Plan. (Kathleen H. Rippere, Natural Resource Chairperson, League of Women Voters)

RESPONSE:
The performance of the stabilized dunes at Cape Hatteras National Seashore is discussed in Volume 2, Section IV.B.3.g and was considered in the formulation of the Master Plan.

169.
COMMENT:
If inlet must be by-passed instead of allowed to function naturally we would prefer the cheapest method of doing this. Since, obviously any by-passing has only a limited favorable effect to the beaches updrift of the inlet, its primary purpose would have to be to maintain the inlet channel, thus starving the bay side of the barrier beaches. It might be preferable to retain the sand that accumulates behind the jetty protecting the inlet, in the bay for development of additional wetlands. (Kathleen H. Rippere, Natural Resource Chairperson, League of Women Voters)

RESPONSE:
Sand bypassing, as discussed in Volume 2, Section IV.B.3.e, is primarily intended to relieve the erosion which occurs downdrift of jetty-protected inlets. The maintenance of the inlet channel for navigation is a secondary benefit which is not considered in detail in the plan. The consultant suggests consideration of inlet bypassing at Shark River Inlet and at Manasquan Inlet. However, in both cases the limited quantities of sand available are insufficient to satisfy the needs of the downdrift beaches. We disagree with the concept of transferring accumulated sands to backbay areas. The sand has far more important use on the ocean beaches.

170.
COMMENT:
In most instances, a replenishing of beach area is the most cost wise plan. (Mayor Robert Nisson, Ship Bottom)

RESPONSE:
Comment is noted.

171.
COMMENT:
The Federal plan and your Plan talks about sand transfer. We provided money in the legislature for it. This bureaucratic agency of state government never asked the legislature. They never ask anybody about what they think ought to be done. (Assemblyman Anthony Villane, District 10)

RESPONSE:
Comment is noted.

172.
COMMENT:
It is proposed to notch certain "north-end" groins which are currently functioning extremely well, impounding sand and protecting the uplands from erosion and storm damage. These are prime examples of good design. In fact, they are working so well that nearby beaches appear to be suffering. The basic problem is lack of replenishment of beach sand.
Notching these structures will simply reduce their effectiveness to provide protection, leaving their beaches vulnerable. It is suggested that other reasons exist at each of these locations for narrow beaches north of the groins. (Leon Avakian, Engineer, Asbury Park)

RESPONSE:
Shore protection structures which act as major barriers to littoral transport are contrary to the New Jersey Coastal Management Program policy, the design philosophy of the Corps of Engineers, and the shore protection planning embodied in this Master Plan. Protection of beaches at the expense of downdrift areas is not consistent with reachwide shore protection planning.

173.
COMMENT:
On Draft Master Plan page IV-26, we suggest that utility and infrastructure sizing as well as siting be considered as a possible mechanism to avoid future storm related property losses. (Barbara M. Metzger, U.S. E.P.A., Region II)

RESPONSE:
Given the highly developed condition of most of the New Jersey Coast, this method would have only limited effectiveness in limiting future property losses. Nevertheless the suggestion is valid and may prove extremely useful in controlling redevelopment after major storm events.

Most utilities, and notably sewage treatment plants and/or collectors, require a coastal permit (CAFRA, Wetlands or Waterfront Development) from the Division of Coastal Resources. These permit decisions are made with reference to DEP's Coastal Resource and Development Policies, and incorporate storm hazard siting considerations in the analysis of service areas.

174.
COMMENTS:
I refer you to Draft Master Plan Figure IV.B-2 on the seawalls. It shows damage here, but one alternative to mistakes like this is sometimes removal of them. Nowhere in the plan do you suggest removing anything. (Ruth Fischer, Citizens Assoc. to Protect the Environment, Cape May)

The Draft Master Plan mentions only briefly the possibility of modification or elimination of ineffective or harmful existing erosion protection structures. Both modification and removal — or neglect — of such structures should be provided for in the maintenance programs for all reaches. Groins, seawalls and other structures which have outlined their usefulness due to altered shoreline or bottom configurations or any other reason should not be maintained, and should be removed if feasible. Existing structures that are maintained should, if necessary, be modified to mitigate adverse impacts. (Gary Grant, Natural Resources Defense Council)

The Plan goes too far to preserve what structural devices already exist and to continue to protect areas damaged as a result of them. We refer especially to groins which tend to accumulate sand for the benefit of specific municipalities. (Kathleen H. Rippere, Natural Resources Chairperson, League of Women Voters)

RESPONSE:
Removal of major structures such as seawalls is unjustified. Significant demolition costs would be incurred and the development which has relied on the structure for protection would be immediately threatened. We advocate an approach which educates property owners as to the risks and inevitable losses they face if they choose to remain, and provides some time to relocate out of the area by providing limited maintenance on the protective structure. Maintenance plans for all reaches provide for the upkeep of existing functional shore protection structures.

In certain cases the plan specifically recommends the modification of structures which are acting as major littoral barriers. Modification (notching) of high profile groins is proposed in Monmouth County where offending structures can be made to work in concert with the adjacent structures without resorting to complete and costly removal. The plan provides the flexibility to modify any additional structures which, on closer examination, prove themselves to be non-functional (i.e., not protecting the shore) or detrimental to adjacent shore areas.

175.
COMMENT:
Certain groins, jetties, and seawalls which had some degree of success in slowing the effects of erosion become obsolete and may in some instances contribute to the severity of local beach erosion conditions. We recommend that funding not be appropriated to maintain such structures but that they be removed. Modification of existing maintained structures to alleviate adverse impacts should be undertaken if found be be cost effective and in the interest of public safety. (Paul Dritsas, American Littoral Society)

RESPONSE:
Structural maintenance is provided for functional structures. Non-functioning structures are not maintained in this plan unless they are modified or improved. Certain structures, which contribute to erosion, have been identified and are recommended for modification. Removal of shore protection structures is addressed in the preceeding comment response.

176.
COMMENTS:
Section V.B. of the Draft Master Plan on engineering alternatives is complete and instructive. However, two important techniques are neglected in the discussion of engineering concepts: dune construction and modification or removal of ineffective or harmful existing structures.

Dune construction is excluded from the scope of engineering techniques covered in the Shore Protection Master Plan. The Plan should include an evaluation of dune construction and stabilization used in conjunction with beach nourishment. Such an evaluation should focus on the value of artifically constructed dunes as habitat and as a supply of beach sand which might increase the life span of beach nourishment projects. Manmade dunes, stabilized by planted vegetation should be studied as a potential substitute for new or repaired bulkheads and seawalls in protecting ocean-front properties. (Gary Grant Natural Resources Defense Council)

Dune construction, stabilization, and maintenance should be used in association with beach nourishment projects. There are portions of our shoreline where man-made dunes of suitable height and width may be useful in protecting development from ocean forces and may increase the life span of beach fill projects. (Paul Dritsas, American Littoral Society)

RESPONSE:
Volume 2, Section IV.B.3.9 discusses the value of dunes as sand reservoirs to nourish beaches during storms and as levees during high water conditions. Along many of the oceanfront reaches bulkheads and/or seawalls are at or near the waters edge. In these cases man-made dunes would not be a realistic substitution for repair and maintenance of the existing structures. For other areas, where dunes are present, dune stabilization and maintenance (sand fencing and grass planting) are viable. This design concept is in keeping with the policy of nonstructural erosion control rather than flood control which was not within the scope of the Master Plan Study. Dune construction for flood control is practical only where significant beach widths exist in front of the dune line.

177.
COMMENT:
Draft Master Plan Chapter IV B.3.h, "Headland Stabilized Bays," seems to say "it might work." Why not try it? (Michael Hyland, Upper Township Engineer)

RESPONSE:
The plan recommends that the Corps of Engineers tentatively selected plan (Philadelphia District Corps of Engineers, 1980) be adopted in Reach 15 (Cape May Inlet to Cape May Point). That plan essentially treats the Lower Township segment of that reach as a headland stabilized bay.

178.
COMMENT:
Draft Master Plan, page ES-3, indicates that "Non-structural engineering projects, such as beach nourishment, can provide some level of short-term protection until other relocation schemes are in place." What other relocation schemes, is the question. (Robert Latorre, Publicity Director Seaside Heights)

RESPONSE:
Volume 2, Section IV.C.3 discusses the relocation programs and incentives referred to in the text quote.

179.
COMMENT:
Proposed programs generally include beach enrichment and cost-effective improvements, and are endorsed by the Coastal Counties Committee. (Robert Halsey, New Jersey Coastal Counties Committee)

RESPONSE:
Thank you for your support of the engineering element of the Master Plan.

180.
COMMENT:
The County recognizes the limitations of capital intensive projects, such as jetties, which are generally beyond the ability of local governments to finance considering the 50-50 State-municipal cost sharing requirement. The draft Plan overestimates the cost of beach nourishment and replenishment and should be re-evaluated. (Leonard T. Connors, Jr., Ocean County Freeholder Director)

RESPONSE:
Estimated costs for beach nourishment utilizing offshore sources are consistent with costs experienced in recent Federal projects at Rockaway Beach, New York and Miami Beach, Florida.

181.
COMMENT:
"Costly long-term engineering solutions, such as extensive beach fill and groins should not be implemented as emergency projects." Am I correct in translating that to mean such solutions should (or can) be implemented as a part of a program viewed as a non-crisis but as a necessity, particularly if local fund are used and no adverse impact is anticipated elsewhere in the "reach?" Please enlighten me on this matter. (E.F. Pain, Stone Harbor)

RESPONSE:
Erosion control projects are appropriate if they are consistent with the conceptual reach engineering plans provided in the Shore Protection Master Plan. Where State and Federal cost sharing is involved, projects must be cost effective (benefit/-cost ratio greater than 1.0). Such projects will be evaluated for implementation with available funds on a case-by-case basis.

182.
COMMENT:
Are all of the alternate reach engineering plans acceptable from a marine geological perspective and an engineering perspective that may be applicable? (Andrew Previti, Engineer, Sea Isle City/Ocean City)

RESPONSE:
The economic, physical, and environmental implications and impacts have been considered in developing the alternative oceanfront engineering alternatives. The engineering plans are developed within areas (reaches) affected by similar coastal processes. The reach concept in the Master Plan engineering design process was used to reduce the potential for any one shore erosion control program to produce adverse physical effects in adjacent shore areas. A generic discussion of anticipated environmental effects have been provided in Volume 2, Section V.B.1.
As with any massive engineering program, there will likely be trade-offs between the positive and negative aspects. A more detailed assessment of impacts for specific reach projects will be performed during reach specific, pre-construction studies.

183.
COMMENT:
In terms of engineering, that's one area where we agree with the general thrust of the proposed plan. Hey, man, let's move ahead with those types of engineering proposals. (Elwood Jarmer, Planning Director, Cape May County)

RESPONSE:
Comment is noted.

184.
COMMENT:
Coastal engineering is the only way to proceed for the coast. The proposed expenditure of $26.4 million over the first four years and $4.5 million annually for the next 50 years for our coastal engineering program for New Jersey are a pittance compared to the billions of dollars generated by a healthy economy with a projected revenue of 19 to 20 billion dollars in 1990. (Ken Smith, Chapter of the Citizen for Local and Intelligence Control)

RESPONSE:
Comment is noted.

185.
COMMENT:
The plan places great emphasis, for example, on the creation of sand dunes as opposed to the creation of jetties and bulkheads. Given the reality of nature and the power and strength of the ocean, we must do what is necessary to save our shorefront. (Charles Worthington, Atlantic County Executive)

RESPONSE:
Comment is noted.

186.
COMMENT:
I think we all realize now that the engineering portions in that study should be pursued. The nourishment of our coast should be done. Structural benefits should be put in, natural, fill, etc. We should pursue all that. (Mayor James Mancini, Long Branch Township)

RESPONSE:
Thank you for supporting engineering programs proposed in the Master Plan.

187.
COMMENT:
The engineering proposals outlined in the Plan present a more workable approach to managing shore erosion and mitigating the hazards associated with coastal storms. I support the concept of establishing priority engineering programs where the projects are cost beneficial and cause minimal adverse impacts to the environment.

I don't agree that such projects will serve only an interim transitional role. A set of well-drafted and designed regulatory controls may be a step in the right direction, they alone cannot be expected to solve the long-standing problems. Engineering and non-structural alternatives where feasible will continue to be a necessary component of any effective shore protection program. Plans should begin now for long-term structural and non-structural erosion control programs. Let's not mislead ourselves by assuming such programs to be merely transitional in nature. (Alfred Scerni, Director of District Office Operations for Congressmen William T. Hughes)

RESPONSE:
Comments are noted and appreciated.

188.
COMMENT:
The engineering alternatives are broken down into two categories, which are structural and non-structural. The structural solutions pertain to the sea walls, bulkheads, groins, and jetties. I agree with the comments contained therein, and I think that most of us here have no problem at all with what is proposed pertaining to additional groins and jetties. (Senator Brian Kennedy, District 10)

RESPONSE:
Comment is noted.

189.
COMMENT:
Upper Township takes issue with the presumption that non-structural solutions to shoreline erosions problems are preferred over structural solutions. We are aware that this attitude is embodied in the Coastal Resource and Development Policies as adopted by the Department in September 1978 and hereby request that the Commissioner reassess the Use Policies on coastal engineering (NJAC7:7E-7.11). (Michael Hyland, Upper Township Engineer)

RESPONSE:
The DEP continues to disagree for reasons stated throughout the Master Plan and the Coastal Management Program. Shorelines stabilized with hard shore-parallel structures are protected at the expense of the beach seaward of the structure and the adjacent coastal areas without structural protection. In most cases, this performance is inconsistent with reachwide erosion control planning and protection efforts and the cited State Coastal Management Use Policies related to coastal engineering.

190.
COMMENTS:
It is the opinion of the Township of Upper that, contrary to the stated rationale in the coastal engineering use policies, bulkheads and groins have proven themselves to be effective in Upper Township. Our most recent damaging storm of approximately 6 weeks ago is typical case in point; the north end of Strathmere and that portion of Sea Isle City where groin fields and bulkheads exist was left by the storm only slightly damaged while the Whale Beach portion of Strathmere and the northern portion of Sea Isle City were severely damaged by the storm. The unprotected dune was a total loss. (Michael Hyland, Upper Township Engineer)

I personally don't support the use of bulkhead in beach stabilization. It may be appropriate, however, in areas such as along Commonwealth Avenue in Whale Beach, where a last line of defense is desired, to construct a sloped revetment. I have done so in Ocean City at the north end of the boardwalk (St. James Place) with "Gobimats" at a location just upgrade of the high water line and found that they survived the most recent storm quite nicely. (Michael Hyland, Upper Township Engineer)

RESPONSE:
Hard structures, such as bulkheads and seawalls, can and do provide protection for property behind them. However, the loss of beach material seaward of the structure will continue and will be accelerated by reflection of wave energy off of the structure. The inevitable course of events is illustrated in Volume 2, Figures IV.B-2 and IV.B-3.

A soft beach in contrast "gives" under wave attack as shown in Volume 1, Figure I.C-7. The material deposited in the offshore bar can then be transported back onto the beach by long period swells. The beach can therefore be somewhat self healing and, just as importantly its presence does not increase the potential for erosion damage to adjacent coastal segments.

191.
COMMENT:

Reexamine the basis for the statement that groins reduce erosion losses by 25%. In the Ocean City/Sea Isle City area with which I am most familiar, I feel they do much better than that. My feelings are consistent with most of the other public comments I've heard on this issue. There will be continued resistance to the idea of spending millions on beach fill when too many of the people who live on the beaches being filled have watched the sand wash away over the years. I personally believe that, at least in the areas with which I am familiar, groins will prove to be an economical means of stabilizing initial beach fills and thereby reducing periodic maintenance filling. (Michael Hyland, Upper Township Engineer)

RESPONSE:

Groin field performance is dependent on several factors such as the functional integrity of the structures, the amount of sand available in the littoral transport system and the littoral transport rates. Since these factors vary from location to location along the New Jersey shore, the level of erosion loss reduction is also expected to vary locally and may be higher or lower than the average 25% value used for Master Plan design. The 25% value was assumed for all oceanfront reaches since reach specific performance data was not available. We agree that appropriately located and designed groins fields can be effective in retaining sand on restored beaches. As indicated by the plans for Ocean City and Sea Isle City, groin field maintenance, modifications and extensions have been recommended under the Master Plan program.

192.
COMMENTS:

While we do support the Plan, there are some areas of modification that we feel are necessary. One of these involves the federal participation. We feel that a proposed beach profile should be submitted to the Federal government. (Michael Ingram, City Engineer, Atlantic City)

In order to increase the possibility of Federal participation in the beach fill projects, it is recommended that the beach profile adopted, be of sufficient height, width and configuration, that it would be approved by the Corps of Engineer for major storm protection. (J. Thomas Wood, Egg Harbor Borough Engineer)

RESPONSE:

Typical beach profiles used throughout this plan are illustrated in Volume 2, Figure VI.A-1. These profiles are generally consistent with the profiles developed in the Corps of Engineers feasibility level studies. The Master Plan profiles are subject to change based on results of pre-construction studies which would evaluate actual wave climate and beach conditions at each project site. Review by the Corps of Engineers for possible cost sharing is a definite part of this program. Efforts will be made throughout to ensure that final designs are satisfactory to the Corps of Engineers and can qualify for Federal participation. In addition, other aspects of the plan, such as a requirement for enhanced public access, also are important to maximizing Federal participation.

193.
COMMENT:

A serious deficiency of the Shore Protection Master Plan in regard to structural shoreline protection is the failure to evaluate recommended alternatives in light of section 7.7E 3.21 (b) 5 of the CMP. The Master Plan must demonstrate how the structural projects it recommends satisfy the coastal policy which discourages "shore protection structures...that would contribute to significant updrift or downdrift erosion or accretion." Failure to supply such a demonstration may be a violation of the CMP. Maintenance of existing structures as well as construction of new structures must be in compliance with subsection 3.21 (b) 5 and any other applicable policy of the CMP. (Gary Grant, Natural Resource Defense Council)

RESPONSE:

The Draft Master Plan clearly points out that nonstructural alternatives have been given priority over structural alternatives in the spirit of the Coastal Management Plan.

In developing engineering alternative plans, nonstructural measures were used to the maximum extent possible. Structural solutions are recommended only where they would significantly improve the protection function of beach fill measures and where they would not result in adverse impacts on adjacent shoreline areas. Generally this occurred only in limited situations, such as where an additional groin would complete a groin field. As a result the recommended plans contain very few new structural features. Maintenance is provided only for functional structures, that is, those which are performing as intended. Several structural features which are causing serious downdrift problems are recommended for modification to correct those problems.

Although an explicit structure by structure CMP consistency demonstration is not presented in the Draft Plan, each structural recommendation has been developed in a manner consistent with the Coastal Management Plan policies.

J. REACH CONCEPT

194.
COMMENTS:
I support the concept of regional supervision of shoreline protection in the plan. (Dr. Stewart Farrell, Stockton State College)

We also very highly support the reach concept. Neither do we, or other municipalities want to have any adverse impacts from projects conducted updrift; nor do we wish to have any impact from municipalities which are downdrift. (Michael Ingram, City Engineer, Atlantic City)

Application of the Plan on a Reach basis is a step toward breaking from the municipal tradition to a regional concept that will make management of the shorefront easier and considerably more intelligent. (Kathleen H. Rippere, Natural Resources Chairperson, League of Women Voters)

We support the "reach" concept. Our barrier beaches move as units, sand lost from one is gained on another. They comprise a system which is shaped by the ocean's forces. (Paul Dritsas, American Littoral Society, Sandy Hook)

Adequate coordination between adjoining municipalities is assured in the Plan through the implementation of the beach reach concept. Atlantic City wholeheartedly endorses this concept since we do not wish to adversely affect another municipality while planning for our own projects, nor do we wish to be affected by beach erosion projects implemented in our immediate vicinity. (Michael Ingram, Atlantic City Engineering Department)

RESPONSE:
Thank you.

195.
COMMENT:
In dividing the New Jersey coast into reaches or sections with common problems within them, the draft shows a great need for a consistent approach among local governments. (Winifred Meyer, American Association of University Women)

RESPONSE:
Agreed. Municipalities will have to work together for the good of all. This will be critical to the implementation of the proposed reach engineering plans.

196.
COMMENT:
If one municipality in the reach does not show interest in participation in a program for that reach, how would this affect the other municipalities in a particular stretch? (Andrew Previti, Municipal Engineer, Sea Isle City)

RESPONSE:
For the reach engineering projects, if one or more of the participating municipalities are not interested or not willing to participate in the proposed program, the DEP will consider the next reach on the priority list — and so on. Where the priority reach project is a structural maintenance program, local participation and implementation may be addressed for municipalities individually if no adverse impacts will result in adjacent shore areas.

Specific rules and regulations for implementation of shore protection projects under the Master Plan Program are currently being developed by the DEP.

197.
COMMENT:
We question the separation of the beach system in Reaches 2 and 3. The proposal to split the region between Monmouth Beach and Long Branch may create an artificial division in the littoral process north of Shark River Inlet. (Paul Dritsas, American Littoral Society, Sandy Hook)

RESPONSE:
The division of littoral processes at the Reach 2 and 3 boundary was carefully considered in developing the reach designation and alternative engineering plans. During initial evaluation of sand recycling schemes for reach design, Reaches 2, 3 and 4 were all considered recycling cells within one reach (Reach 2). Since a strong interdependence was recognized between these cells under the recycling scheme, littoral processes would be effected, unless engineering plans were implemented in downdrift cells first and updrift cells last.

Eventually, based on cost considerations, recycling schemes were dropped in favor of conventional renourishment. Under the conventional renourishment schemes, no significant interdependence between the Reach 2 cells was found. Consequently the cells were treated as independent reaches.

K. REACH SPECIFIC COMMENTS

1. REACH 1 — RARITAN BAY

198.
COMMENT:
As far as the Aberdeen-Cliffwood Beach project is concerned, it is our feeling that enough public money has been put into this project already. Obviously, the seawall cannot be removed (although we are told it is cracking) and beach fill now seems imperative if the beach is to be used for recreational purposes, not to mention for purposes of beach-breeding creatures like horseshoe crabs and, possibly, shore birds. Therefore, we must pay for beachfill, but those towns that contracted for the seawall should be held strictly accountable for their shore otherwise similar demands will proliferate. (Kathleen H. Rippere, Natural Resource Chairperson, League of Women Voters)

RESPONSE:
Comments are noted.

199.
COMMENT:
We have not looked into the situation at Waackaack Creek where the Army Corps of Engineers floodgates are placed to protect the entire low-lying area behind their extensive flood control project running from Pew's Creek in Middletown to Waackaack Creek in Keansburg. However, there have been complaints from fishermen that the gates are causing shoaling inside the creek mouth. This is occurring in Middletown in places behind the flood-control dike, in part because the municipality does not regularly clean the small floodgates in the dike. (Kathleen H. Rippere, Natural Resource Chairperson, League of Women Voters)

RESPONSE:
The referenced project was not evaluated in preparation of the Shore Protection Master Plan. The scope of the study was shore erosion control, not flood control. The DEP, Bureau of Coastal Engineering does, however, have jurisdiction over such matters.

200.
COMMENT:
Our observations do not completely agree with those of the Consultants on the action of littoral currents. At Pew's Creek in Middletown, the jetty supposedly protecting the inlet to a marina has trapped enough sand so that the beach to the west of the creek is an estimated 30 or more feet landward of the beach to the east. Also there is an obvious accumulation of sand — at least at times — offshore in the bay in front of the mouth of the creek threatening shoaling of boats. (Kathleen Rippere, Natural Resource Chairman, League of Women Voters)

RESPONSE:
In discussing the erosion conditions in Raritan Bay, the Draft Master Plan characterizes the bayshore littoral currents as weak and the resulting east to west net littoral drift as relatively small. A major littoral barrier such as the Pews Creek jetty would be expected to accumulate sands even under very low littoral drift conditions. Thus, such accumulation is not inconsistent with the above characterization. When significant sand accumulations are found updrift of minor groins and other projecting features, there is evidence of a high littoral drift rate. However, these accumulations are not noted along the Raritan Bay shore.

2. REACH 2 — SANDY HOOK TO LONG BRANCH

201.
COMMENT:
The Draft Master Plan states that engineering schemes to include nourishment sands are not cost effective for Reach 2. Sufficient volumes of sand would have to be obtained at less than current prices and economically stabilized. While we do not question this reasoning by Dames & Moore, we do question the statistics used in determining the cost/benefit ratios in their report. In particular, we question the property protection figures, improvement unit costs, property protection values, and the cost/benefit calculations which are not included in the report. For example, the true value of assessed property in the Borough of Sea Bright is in excess of $55 million. In addition, there is over $7 million worth of roads and improvements situated within the Borough. Therefore, a breakdown of how the consultants arrived at the property protection figures is questioned. (Stephen DePalma, Schoor, DePalma & Gillen, Inc.)

RESPONSE:
In the benefit/cost analysis used in the Shore Protection Master Plan analyses, property protection benefits, expressed in present worth values (1980 dollars) represent the benefits achieved under an engineering alternative plan in prevention of property loss associated with storm and long-term erosional damages over the life of the program. The benefits credited to an engineering plan include the values of probable losses to commercial and residential lands and structures (including commercial and residential buildings, boardwalks, roads, and utilities) that could occur if no action is taken.

As indicated in Volume 2, Table VII.B-6, the estimated gross value of real property protected over the life of the project under the engineering alternatives ranges from $59 to $64 million for Reach 2, depending on the alternative. As indicated in Volume 2, Table VII.A-1 this translates to $6.8 to $7.3 million in present worth value. The present worth of property protection benefits are derived with cognizance of the capability of the seawall and beach area to retard the occurrence of erosional and storm damages. Since the seawall and beach area forms the first line of protection against erosional damages, these damages would occur earlier in the property zone areas fronted by a narrow beach and no structure than in protected areas. As discussed in the responses to comments 203 and 206 below, although local beaches are likely to occur in the seawall, massive failures are not likely during the planning period, especially if the structure is maintained as recommened in the Master Plan.

Again, it must be stressed that proposed projects and associated costs and benefits were developed for shore erosion control — not flood control or protection. Flood protection project costs and associated protection benefits would be substantially different.

Where no action is taken it is assumed that erosion will continue and property and infrastructure losses will occur. During the 50-year planning period, erosion would encroach only upon a narrow strip of property along the oceanfront (not the entire Borough of Sea Bright as has been suggested above). Only the property and infrastructure within the narrow strip is taken as benefit when engineering programs are implemented.

An upgraded discussion of the benefit/cost methodology has been incorporated in Volume 2, Chapter VII.

202.
COMMENT:

If it is found necessary for sand replenishment, just dredge the channel of the Shrewsbury River and pump it over to the beach, approximately 300 feet away. It's been done before. Two necessary environmental jobs without using a barge. Why should there be a charge for barge carting? Why is repair of short wooden groins to protect a seawall in a critical area rejected whenever longer, bigger stone jetties with expensive sand-by-pass pumper structures as approved at the inlets? (Loretta Hanley, Sea Bright)

RESPONSE:

Successful beach nourishment projects require that adequate volumes of suitable sands be provided. The suitability of the sands is a function of the match of the grain size distributions of the existing beach and the sand with which it is to be nourished. Failure of past projects (i.e., rapid loss of sand) may be due in part to the use of poorly suited fill materials.

Maintenance of existing functional groins is recommended for Sea Bright in this Plan. The Plan does, however, suggest that the erosion conditions induced by the existing jetties (Manasquan and Shark River Inlets) can possibly be mitigated to some extent through inlet bypassing. Volume 2, Chapter VIII includes a cost analysis of various beach nourishment schemes including inlet bypass with supplemental nourishment. The Corps of Engineers, Philadelphia District is currently completing a more detailed study of this alternative.

203.
COMMENTS:

The Draft Master Plan provides for badly needed repair and maintenance of the seawall. While maintenance is a starting point, it is simply not enough. A protective beach is needed to protect the seawall. It suggests that a maintenance program be instituted while future planning is underway, but planning has been going on for years.

Reach number 2 is running out of time for planning. Action is needed in the direction of more permanent and ultimate solutions for the hazardous erosion problems. (Stephen DePalma, Schoor, DePalma & Gillen, Inc.)

The Board is particularly concerned over the apparent abandonment of the Boroughs of Sea Bright and Monmouth Beach to the forces of nature. The Draft Plan states correctly that the seawall will fail without beach nourishment. It further provides for the repair of the seawall, but not for the essential beach nourishment. In this regard the Draft Plan speaks of economic feasibility but does not give much weight to threat of loss of life and property. (Robert D. Halsey, Director of County Planning, Monmouth County Planning Board)

Ninety per cent of the population of Sea Bright and Monmouth Beach lives west of Highway 36. Therefore, the general public will be served by protecting our wall. We feel Monmouth Beach and Sea Bright should be given special consideration because of our unique situation. (Mayor Brent Neale, Monmouth Beach)

While beach alone may rapidly wash away, groins will stand a truer test of time.

The Boroughs of Sea Bright and Monmouth Beach understand the financial restraints and are willing to fund up to $600,000 of a groin construction project. These figures are based upon the bonding potential of the Boroughs and budgeting which the Boroughs could reasonably afford.

The Federal Government should also participate in the cost sharing for shore protection projects in Reach 2 since access to Sandy Hook (Gateway National Recreational Area) may continue to be assured. Therefore, the Federal Government should be interested in expanding and participating in a shore protection project such as the contruction of groins and beach fill for Reach No. 2. (David Magno, Schoor, DePalma & Gillen, Inc.)

RESPONSE:

Under two of the five alternative engineering plans evaluated for Reach 2, beach nourishment and groin construction were considered for stabilization of the deteriorating seawall. These were the Recreational Development and Combination Alternatives. Under the Storm Erosion Protection and Limited Restoration programs, periodic beach nourishment was considered without groin construction. The Maintenance alternative included no new structures and no periodic renourishment.

Three of the five reach alternatives evaluated were found to be clearly cost beneficial. In decending order these were the Maintenance Program (B/C ratio 1.51), Limited Restoration (1.27) and Storm Erosion Protection (1.13). The cost of implementing these alternatives was inverse to the benefit/cost ratio as follows: Maintenance —$4.5 million; Limited Restoration — $8.6 million; and Storm Erosion Protection — $10.4 million.

In accordance with the policy of implementing the most cost beneficial project for each reach, the Master Plan provides for implementation of the Maintenance Alternative which also happens to be the lowest cost alternative. This is consistent with the fact that Monmouth Beach and Sea Bright officials have indicated grave concern regarding their ability to cost share at any level of shore protection.

Regarding any threat to the Route 36 access to Gateway National Recreation Area, Sandy Hook, analysis performed by the consultant indicates that massive failures of the protective seawall are not likely during the planning period, especially if the structure is maintained as recommended. It is assumed that local storm related seawall failures would be repaired under DEP shore protection contingency plans.

204.
COMMENT:

A beach with groins to stabilize the beach is also urgently required. A sand nourishment project would only be viable since the sand cannot be stabilized at the existing groin system. The predominately northward drift will sweep the beach fill away and deposit it offshore at Sandy Hook. Any beach fill nourishment project would have to be incorporated with a groin fill construction program.

The construction of groins and periodic beach nourishment is necessary now, and we cannot wait for post storm repairs as the Plan suggests. (Stephen DePalma, Schoor, DePalma & Gillen, Inc.)

RESPONSE:

As discussed in the above response, alternatives which place sand on the beaches of Reach 2 (Storm Erosion Protection with a benefit/cost ratio of 1.13 and Limited Restoration with a benefit/cost ratio of 1.27) do not prove to be as cost beneficial as the maintenance program (B/C ratio of 1.51) which has been recommended for this reach.

205.
COMMENT:

The seawalls in Sea Bright and Monmouth Beach should and eventually will go, but it does seem necessary to bring this step about as discreetly as possible through education, hopefully some sort of tax or insurance incentives, relocation aids and, in the meanwhile, through minimal maintenance of the seawalls. Construction of more groins in front of the walls to hold replenished sand would seem to compound the problem, and, furthermore, would serve, primarily, private interests. (Kathleen H. Rippere, Natural Resource Chairperson, League of Women Voters)

RESPONSE:

Comment is noted.

206.
COMMENT:

Open to question are the costs associated with the inlet bypass operation and the economic benefits derived from various alternatives. For example, in the analysis of a Manasquan Inlet sand bypass, there did not appear to be any cost attributed to the need for periodic dredging of sand from the inlet, caused by the sand moving around the tip of the south jetty. Nor was there any cost associated with property damage to riverfront municipalities such as Rumson and Highlands if the barrier beach on Reach 2 is breached. (Robert D. Halsey, Director of County Planning, Monmouth County Planning Board)

RESPONSE:

The cited analysis of beach nourishment approaches provided in the Draft Master Plan Appendix F (see Volume 2, Chapter VIII) was a cost comparison not a cost-benefit comparison. For the Reach 4 example, the conventional nourishment from offshore sources and the inlet sand bypassing with supplemental nourishment schemes had the lowest present worth cost totals ($9.4 and $13.0 million respectively). Since the conventional nourishment scheme had the lowest overall total present worth cost, it was chosen as the primary system for the reach.

Regarding the inlet bypassing scheme, the need for periodic inlet maintenance dredging would not be completely removed since only a portion of the inlet channel shoaling is caused by the spillage of beach sand around the inlet's south jetty — a portion is also contributed by transport from the inlet ebb tidal shoal offshore. Case histories for operation of Florida inlet bypassing systems indicate mixed results, ranging from no effect to reduced inlet channel shoaling rates.

Future escalations in the costs for beach nourishment could drive up the project cost under the conventional scheme as compared to inlet bypassing with supplemental nourishment. Since none of the Reach 4 projects evaluated are high on the priority list, it is likely to be some time before any of them are considered for implementation. It would be appropriate to update the cost estimates for any future projects under the reach specific design phase of the Master Plan Program.

Regarding costs associated with riverfront, private property damage in Rumson and the Highlands, the analysis performed in preparation of the Master Plan indicates that massive failures of the Sea Bright seawall are not likely during the planning period, especially if the structure is maintained as recommended. While it is recognized that local seawall failures and breaching of the barrier island (e.g., at the narrow barrier south of Sandy Hook) could occur during severe storm events, with or without the recommended structural maintenance, it is assumed that such beaches would be repaired under DEP shore protection contingency plans. Significant erosion damage is not expected to occur along Rumson and Highlands waterfront areas as a result of temporary breaches of the Reach 2 barrier islands.

207.
COMMENT:

I wish to remind all interested parties that reach three and four, covering the stretch from Long Branch south to the Manasquan Inlet, are critically developed areas with relatively dense populations compared with the balance of the coast. It is unsound planning to exclude this area from desperately needed maintenance and repair. (Leon Avakian, Municipal Engineer, Asbury Park)

RESPONSE:

Comment is noted. Please note that Reaches 3 and 4 have not been excluded in the Master Plan. Although reach-level engineering projects were not found to be economically justified, the Master Plan recommends that a limited program of maintenance and/or modification of existing structures be adopted on a local level. These projects would be considered for implementation by the DEP on a case-by-case evaluation.

208.
COMMENT:

Utilities located along Route 36 present a special and more difficult problem. At a minimum, since they must continue for the time being to be protected, some contingency plan should be worked out in considerable detail for their emergency control (sewerage and water shut-off) and relocated hookups. Money should come from the source that provided for the utilities in the first place. (Kathleen H. Rippere, Natural Resource Chairperson, League of Women Voters)

Utility companies have never been required to share in the project costs for past shore protection programs. However, their pipes and transmission conduits are also benefiting from shore protection projects. Any utility damages incurred from storm damage would have to be replaced by the associated utility company. (David Magno, Schoor, DePalma & Gillen, Inc.)

RESPONSE:

Although emergency control and repair of utilities is normally the responsibility of utility companies, the DEP may get involved in the coordination of that effort as part of its storm response contingency planning for vulnerable coastal areas such as Sea Bright and Monmouth Beach.

209.
COMMENT:

On page VI-18, the Master Plan calls for an initial expenditure of approximately $4 million and an annual maintenance expenditure of $71,000.00. There are no details as to how these funds are to be spent except to say it's for maintenance and post-storm repair. (David Magno, Schoor, DePalma & Gillen, Inc.)

RESPONSE:

Initial structural repairs for Reach 2 are estimated to cost $3.7 million. This would include repairs to 16 functional groins and approximately 2300 linear feet of stone seawall. An average annual expenditure of $71,000 would be required to maintain the groins and the 24,250 linear feet of existing seawall during the economic life of the project. Cost estimates for post-storm repairs to beach berms are not provided under the maintenance program since contingency funding would be made available for the purposes.

3. REACH 3 – LONG BRANCH TO SHARK RIVER INLET

210.
COMMENT:

You would note that Dames & Moore concludes that "none of the reach-wide engineering alternatives evaluated are economically justifiable" for Reach 3. I would like to point out that in the early 1950's, at the direction of Congress, the U.S. Army Corps of Engineers conducted a beach control study for our shoreline from Sandy Hook to Barnegat Inlet. Congress gave formal authorization for the project proposed in 1958.

The recommended project provided for artificial placement of large amounts of sand along the entire shore from Sea Bright to Seaside Park, the extension of existing groins, the construction of additional groins, and establishment of feeder beaches for the periodic nourishment of the shoreline. The project was designed to maintain a beach width of 250 to 300 feet minimum at mean low tide. The Corps of Engineers re-evaluated the proposed project in 1973 and concluded that it was still the best solution to our beach erosion problems, and that it was still economically viable.

The Corps of Engineers reported its findings in a report dated July 1978 titled "N.J. Coastal Inlets and Beaches Fourth and Final Report – Study of Sandy Hook to Island Beach State Park." In Table 4 of Page 21, the Corps of Engineers report shows that for the section of the shoreline from Long Branch to Shark River Inlet, which is Reach 3 in the Dames & Moore Report, $2.70 in benefits will be derived for each dollar expended for their recommended project. How does Dames & Moore reconcile its findings with those of the Corps of Engineers that it is not economically feasible to form any engineering projects? (Mayor Martin Vaccaro, Borough of Allenhurst.

RESPONSE:

The referenced Corps of Engineers studies were reviewed in an attempt to provide clarification of the differences in benefit/cost analysis results. Although the referenced documents did not provide definitive details of the updated analysis which yielded a benefit/cost (B/C) ratio for the Long Branch to Shark River Inlet Reach, it is clear that the basis of the difference between the Corps B/C ratio (2.7:1) and the Master Plan B/C ratio (0.49:1) for approximately equivalent shore protection projects is in the dollar value taken for recreational benefits.

Although engineering costs and storm protection benefits are approximately the same, recreational benefits taken by the Corps for the project were about four times as great as those taken in the Draft Master Plan for the Storm Erosion Protection Alternative. This basically translates to four times as many people using the beach over the same period of time.

Since recreational demand projections used by the Corps were larger than those projected by the Consultant, higher initial benefits and total benefits are indicated for additional beach users accommodated. Possible differences in recreational demand projections and resultant benefit cost ratio are as follows:

1) The Corps projections were based on actual beach counts in the late 60's. They then used an early NJSCORP (NJDEP, Office of Environmental Review, 1973) study to develop estimated growth rates. The Consultant used the Corps data to determine the relative beach usage among beach areas within each county. A later NJSCORP study (NJDEP, 1977) was used as the source of county by county beach demand data.
2) The Consultant adjusted SCORP recreational demand data in Monmouth County to account for demand accommodated at Sandy Hook - Gateway National Recreational Area (approximately one million visitors per year). The Corps beach count data would not normally require such adjustment. However, the demand increase experienced by the Sandy Hook area, after it became a national recreation area, may have distorted the beach usage in the northern coastal areas.
3) The Consultant and the Corps used different beach user area requirements. The Consultant's criterion would provide more beach area per user (100 sq. ft vrs 75 sq. ft used by the Corps). The reasons for this difference in criterion and an expanded discussion of its effect on the cost benefit analysis are discussed in Volume 2, Section VII.B.3.
4) Very significant cost increases for beach fill have occurred as a result of the oil price increases of the past few years.

In conclusion, the Consultant's analysis includes a lower recreational demand and a higher cost to satisfy that demand.

211.
COMMENT:

Table I.C-4 on Draft Master Plan Page 1-36 erroneously shows, for the Borough of Allenhurst, zero municipal riparian grant footage and 402 feet of private riparian grant footage and 402 feet of private riparian grants. Actually, Allenhurst has a 110-foot, municipal riparian grant, and the private grants total 292 feet. (Mayor Martin Vaccaro, Borough of Allenhurst)

RESPONSE:

Appropriate corrections have been incorporated in the final document.

212.
COMMENT:

We appreciate the suggestion that groins at Deal and Sylvan Lakes be broken to permit some littoral drift to function. It seems to us that this concept should be applied more frequently. (Kathleen H. Rippere, Natural Resource Chairperson, League of Women Voters)

RESPONSE:

Comment is noted.

213.
COMMENT:

It becomes unthinkable that the very important Reach number 3, Long Branch to Shark River, and Reach number 4, Shark River to Manasquan, have been placed so low on the priority listing. (Mayor Andrew Raffetto, Spring Lake)

RESPONSE:

In any plan involving distribution of limited funds using a priority scheme, there are winners and there are losers. Every project can't be at the top of the list. As one can see from reviewing the estimated costs of the various engineering alternatives evaluated in the Master Plan, the cost of doing anything, other than structural maintenance, on a statewide basis would require funds far in excess of those currently available. As additional bond funds become available for shore protection, the DEP plans to work its way down the priority list for engineering projects, as well as implementing selected non-reach engineering projects.

214.
COMMENT:

There are gross discrepancies in the cost/benefits ratios showing the various Draft Master Plan tables for Reach 3. In Table V.A-1 on Page V-3, the preferred engineering alternative is given as Alternative 5 (maintenance only), and the cost of benefit ratio is shown as 0.95, which is slightly under that for priority Reach 7, which is 0.96. In Table V.B-5 on Page V-30, the ratio for Reach 3 for Alternative 5 is shown as 0.13, and for Alternative 3 is shown as 0.50. In Table V.B-6 on Page V-32, Alternative 3 is shown as the preferred alternative, and the ratio is shown as 0.50.

In essence, what the report is showing is a .95 benefit cost ratio in one place and it is showing a .13 in another place. Then, it is changing the alternative from Alternative 5 to Alternative 3, all of which just is of no consequence because the Plan proposes nothing for Reach 3. (Mayor Martin Vaccaro, Borough of Allenhurst)

RESPONSE:

The correct benefit/cost ratio for Reach 3, Alternative 5 (Maintenance Program) is 0.13. Corrections have been made in the above referenced tables in the final document.

215.
COMMENT:

If Asbury Park cannot afford a police pay raise, how then can it contribute 50% or even 25% toward the cost of needed shore protection? And even so, Asbury Park and surrounding communities in reaches three and four are excluded from the Recommended Priority Engineering Reach Plans. What, then, is to become of the Asbury Park beachfront? When will it become cost effective to repair the beachfront? (Leon Avakian, Municipal Engineer — Asbury Park)

RESPONSE:

Frankly we don't have a satisfactory answer to your first question, since financing is a problem of all government activity. DEP has recommended that the local share of shore protection projects be lower in urban-aid cities (including Asbury Park) than in other areas. Although reach level alternative for Reaches 3 and 4 are not now cost beneficial, there are certain aspects of the reach plans which might be affordable and cost beneficial. The suitablity of less-than-reach, piece-meal projects will be evaluated on a case-by-case, as needed basis.

216.
COMMENT:

Specifically for Reach 3, which includes the borough of Allenhurst, the following recommendation is made. I will read from the Draft Master Plan.

"Engineering Plans. The priority analysis has shown that none of the reachwide engineering alternatives evaluated are economically justifiable. Therefore, no such engineering plans are recommended. It is, however, recommended that a limited program of maintenance and/or modification of existing functional shore protection structures be adopted on a local level. Local projects are conditionally acceptable under this plan if they can be shown to adequately address the needs of the area, and can be shown to be cost effective in a case-by-case evaluation."

Again, no criteria are given for this evaluation. (Mayor Martin Vaccaro, Borough of Allenhurst)

RESPONSE:

Selection and analysis of engineering and land management alternatives is explicit in Chapter V of the Draft Master Plan (see also Volume 2, Chapter VI). Recommendations for each reach were developed based on that analysis.

217.
COMMENT:

"It is recommended that a regulated zone be established along Long Branch to Shark River Inlet area. This zone would include the beach and dune area at a minimum. An erosion set-back line extending from 125 feet to 345 feet (depending on the historical erosion rate for various portions of the Reach) inland from the upland limit of the beach, or the seaward toe of the dune or bluff slope, would delineate the erosion hazard area. A nominal set-back of 20 feet is recommended for coastal segments fronted by a maintained seawall with adequate toe protection. Landward adjustment of the setback distance is appropriate when the seawall toe protection diminishes through erosion. This erosion set back line assumes that no engineering projects would be implemented which would change the historical shoreline erosion rates in the Reach." This is ludicrous. (Mayor Martin Vaccaro, Borough of Allenhurst)

RESPONSE:

Comment is noted.

4. REACH 4 – SHARK RIVER INLET TO MANASQUAN INLET

218.
COMMENTS:

The ready alternate is the proven sand bypass which can be funded and installed under the Bond Issue, providing immediate and continuous relief for Monmouth County beaches. (Leon Avakian, Municipal Engineer, Asbury Park)

The Monmouth County Planning Board endorses the sand-bypass systems at the Manasquan and Shark River inlets, as recommended by the Monmouth County Beach Erosion Committee. The Board recommends the sand bypass supplemented by the placement of sand at strategic points along the beach. (Robert D. Halsey, Monmouth County Planning Board)

Reach number 4 in Shark River to Manasquan is assessed as being a very low priority area. The answer in this particular instance would be to use sand bypass. (Mayor Andrew Raffetto, Spring Lake)

If you look at the photo in the Master Plan, which shows an aerial photo, it shows the Manasquan inlet and it shows how the jetty – really the Manasquan inlet –prevents the natural flow of sand from a southerly to a northerly direction. If you look at the photo in the Plan, the jetty on the south side of the inlet really prevents the sand from flowing in a northerly direction into Manasquan. We moved for the funding of the Shark River Inlet bypass because, you see, that inlet is a State responsibility. The sand bypass necessary for the Manasquan Inlet would be a Federal responsibility, and I have been told that the Army Corps of Engineers is diligently working on the development of that right now. (State Senator Brian Kennedy, District 10)

RESPONSE:

A variety of beach nourishment schemes, including inlet sand bypassing with supplemental nourishment from offshore sand sources, were evaluated in the alternative reach engineering analysis. Results of this analysis, which are provided in Volume 2, Chapter VIII, indicate that conventional nourishment from offshore sand sources is the most economical approach for Reaches 3 and 4.

The Draft and Final Master Plan allow for consideration of bypassing at Shark River and Manasquan Inlets to aid in mitigating local erosion problems which occur on beaches downdrift (north) adjacent to these inlets. It is important to note that in both of these cases, the limited quantities of sand available on the updrift (south) sides of these inlets are insufficient to completely satisfy the needs of downdrift beaches. Under the inlet bypassing alternative, only limited relief of the erosion immediately adjacent to the inlets (at the southern ends of Reaches 3 and 4) would be possible. Additionally, consideration would also have to be given to potential adverse effects to beaches on the south side of the inlets.

The Army Corps of Engineers, Philadelphia District, is currently completing a detailed study of the feasibility of inlet bypassing at Manasquan Inlet. The results of that study will be available shortly after publication of the Shore Protection Master Plan.

5. REACH 5 – MANASQUAN INLET TO MANTOLOKING

No comments were received specifically regarding Reach 5.

6. REACH 6 – MANTOLOKING TO BARNEGAT INLET

No specific comments regarding Reach 6 were received.

7. REACH 7 – LONG BEACH ISLAND

219.
COMMENT:

There is a suggestion for some major expenditure in Long Beach Island that is needed. There is the suggestion of some 3 million dollars in expenditures. That would be money well-spent. (State Assemblyman John Doyle, District 9)

RESPONSE:

Comment is noted.

220.
COMMENT:

On Draft Master Plan page VI-27, one half of Barnegat Light is in the post-storm acquisition area and it is going to be completely wiped out. That includes my borough hall, every service I have had, my fire house, my first aid, my water department, my sewer department, everything. (Major Lloyd Behmke, Barnegat Light)

RESPONSE:

Draft Master Plan post-storm acquisition proposals were provided as a guideline for DEP consideration in the event that large portions of barrier islands are decimated by a severe storm, such as occurred in March 1962. The identification of "target areas," including Barnegat Light Borough, was an attempt to identify vulnerable high hazard areas, which if destroyed by storm, would provide the State an opportunity to purchase manageable barrier island parcels and thereby reduce the potential for future property losses and shore protection expenditures that would result from redevelopment in the same location. It was not intended that "target areas" be considered for acquisition before a destructive storm or was it suggested that undamaged developed areas be considered for acquisition.

Due to the uncertainty in predicting when severe storms will occur and what areas will suffer substantial destruction, detailed post-storm acquisition plans are not practical. In reality, the location and extent of any acquisition will be primarily dependent on available funds. Candidate sites would be considered for possible acquisition based on case-by-case evaluation at the time a storm event occurs.

221.
COMMENT:

My attention has been drawn to two of the "target areas" for post-storm acquisition shown in the map on Draft Master Plan page 7, and this prompts several questions.

First, how firm is this map as a recommendation, and how does it fit in with the plan as a whole? Second, why were Barnegat Light and Beach Haven selected as target areas? They have among the best dunes on Long Beach Island, and Barnegat Light has about the best protected, unspoiled dunes and widest beaches on the Jersey shore. Drastic measures as acquisition would be better used in more vulnerable, low-lying areas where the community has not been rigorous in preserving the dunes and shore.

Finally, how does the State intend to pay for any such acquisition and to what use will the land be put after it has been acquired? (Jerome Walnut, Conservation Society of Long Beach Island)

RESPONSE:

As mentioned in the response to comment number 220 above, "target areas" were provided in the Draft Master Plan as candidate areas to be considered for possible post-storm acquisition. The cost and optimum location for post-storm acquisition would be a function of the location and amount of property effected, post-storm land values, and the type and intensity of development impacted by a particular destructive storm. Under the Master Plan Program, the DEP intends to consider only affordable post-storm acquisition based on case-by-case evaluations and available funds.

Barnegat Light, Holgate (Long Beach Township), and Beach Haven areas of Long Beach Island were targeted as candidate post-storm acquisition areas in the Draft Master Plan because they both occur at vulnerable (high hazard areas) and they lie adjacent to existing State or Federal protected areas. Both of these areas suffered heavy damages during the March 1962 storm despite the presence of protective dunes and wide beaches. Also these areas are lowlying and suseptible to flooding by the 100-year flood level as defined by the Federal Emergency Management Agency, Federal Insurance Administration.

By purchasing areas adjacent to existing public open space lands and recreation areas, the DEP would be able to manage the purchased lands for recreation or wildlife preservation purposes.

8. REACH 8 — BRIGANTINE ISLAND

No comments were received specifically regarding Brigantine Island.

9. REACH 9 — ABSECON ISLAND

222.
COMMENT:

The possibility of future groin field construction should be considered if the projected rate of sand lost proves low or dredging costs raise to an unacceptable level. (Robert Bos, City Engineer, Ventnor)

RESPONSE:

The DEP will be monitoring the performance and cost of engineering projects implemented under the Master Plan program. Periodically adjustments in the program may be necessary to correct problems or reduce costs.

223.
COMMENTS:

We fall in a unique situation in Absecon Island. We had a cost benefit alternative which involved quite a bit of money. It was the highest cost benefit — or benefit cost ratio to do a combination project of recreational and storm protection. The recommendation, which we do agree with the DEP, that it be reduced down to just the storm protection because it doesn't look that much in the cost benefit analysis.

The total cost of the project over a long period of time for implementation would be reduced by 10 million dollars. We can see that advantage, but we feel that the basic beach width should be considered as 200 feet; and in our inlet section, which is our highly eroded area, down to perhaps 400 feet in our down beach areas. (Michael Ingram, Engineer, Atlantic City)

Atlantic City recommends that the minimum width of shore protection beach berm be increased beyond the 100 feet minimum recommended in the report to a more reasonable width of 300 to 400 feet. This would provide additional storm protection, but even more realisticly, additional recreational areas on the beach would be opened up for summer visitors. In the long run, Atlantic City could implement the recreational beach widths stated in the Draft Master Plan. However it would appear to be prudent and advisable to begin the storm erosion protection project with a wider beach. (Michael Ingram, Atlantic City, Engineering Department)

RESPONSE:

In Volume 1, Chapter II of the Final Shore Protection Master Plan, a modified Recreational Development Alternative has been recommended for implementation at Absecon Island on a priority basis. In the modified plan, the recreational design beach width has been reduced to minimize potential adverse impacts on the Absecon Inlet.

224.
COMMENT:

We question that beach use will be as extensive as predicted for Peck Beach and especially Absecon Island. The severe lack of mass transit, parking facilities, and the decrease in beach access in Atlantic City challenges the accuracy of the beach user projections. Public access should be thoroughly defined in terms of present and future conditions before beach use demands can be assessed realistically and used in benefit/cost estimate. (Paul Dritsas, American Littoral Society, Sandy Hook)

RESPONSE:

Long-term planning is essential if the mistakes of the past are to be avoided. For such long-term planning the data base from which to make acceptable projections is often lacking. Future recreational demand and reach carrying capacity limitations are such data elements. Although consideration of recreational carrying capacity was incorporated in the Master Plan analysis, recognizing the imprecise character of demand projections and the estimates of the ability of coastal communities to handle increased beach usage, the recreational development alternatives incorporate opportunities, at about 10-year intervals, to reevaluate the requirements for beach expansion and infrastructural limitations. An opportunity for refinement of engineering designs and recreational demand estimates is also provided for during pre-construction reach specific design studies. Where recreational demand fails to develop or where communities would not be able to handle the demand growth, expanded beaches and facilities are not provided. Thus, the traditional approach of constructing a beach now to satisfy the projected demand at some future date is thereby avoided.

225.
COMMENT:

Basically all of the Reach 9 (Absecon Island) communities agreed in principle with the proposals of the Draft Shore Protection Master Plan. The outstanding exception was the proposed Dune and Shorefront Act which we concluded was objectionable in its present form and was worthy of separate treatment befitting a proposed act of the Legislature.

As neighboring communities, we agreed with the proposed shore protection alternative selected for Reach 9. After considering the various projects, we found that no adverse impacts would be realized upon any of our adjoining communities nor upon our adjoining communities in Reach 8 or Reach 10. We discussed that implementation and funding of the proposed project and we further agreed that each community could independently fund their portion of the project with a match from the State of New Jersey and proceed upon an individual implementation without the need for securing the participation of an adjoining community. In other words, the Reach 9 communities feel that as soon as the funding is ready in each municipality it may proceed with its project without adversely impacting a down drift adjoining community. (Michael Ingram, Engineer, Atlantic City)

RESPONSE:

Thank you for supporting the proposed engineering plans and we note that each reach is prepared to contribute their share of the funds for implementation of the proposed project. One point must be made clear, however. With the exception of the structural maintenance elements of the reach plans, municipality projects will not be implemented individually. This approach would be counter to the intent of "reach" concept in engineering designs. Also, the engineering cost estimates utilized in the benefit/cost analysis to prioritize each project were based on the assumption that implementation would be for the reach as a whole. In this way, unit contract dredging and filling costs are lower than if individual municipalities are done separately.

If municipalities in Reach 9 wish to propose modification of the Master Plan alternative or implementation of smaller (non-reach) engineering plans, these will be considered by the DEP on a case-by-case basis.

226.
COMMENT:

A planning inconsistency was uncovered during our review of the erosion classifications for the Absecon Island reach. Specifically, the south side of the Absecon Inlet has been classified as non-eroding beach. This beach has eroded approximately 400 to 500 feet from the time that Atlantic City was founded. I don't believe any substantial erosion has occurred over the past decade, however, that is due to the fact that erosion limits had proceeded to a bulkhead line that was in existence over the past several decades. In order to be consistent with the remaining classifications of erosion on the shores of Absecon Island, Atlantic City recommends that the erosion category be upgraded to Classification II — Significant Erosion. This would be the same classification granted to the inlet beaches of Atlantic City. (Michael Ingram, Atlantic City, Engineering Department)

RESPONSE:

In the erosion classification methodology utilized in the Master Plan Study, a variety of criterion were used to assess the degree and magnitude of existing and potential erosion damage. The consultant classified the Absecon Inlet shore at the northern end of Reach 9 as Category III (Moderate Erosion) due to the incomplete nature of the inlet shore protection and the vulnerability of private property and infrastructure during large storms (see Draft Master Plan page A-5).

On Figure I.C-3 in Draft Master Plan Chapter I, the inlet shore was incorrectly labeled as Category IV — Noneroding. This discrepancy has been corrected on Figure I.C-3 in Volume 1 of the final document.

227.
COMMENT:

Margate City and Longport are in agreement with the Draft Master Plan recommendations for Reach 9 — Absecon Island, generally, and more specifically that portion applying to Margate City. This is, maintenance of existing groins, bulkheads and seawalls and beach nourishment and fill as required. This would include the construction of new shore protection structures as provided in VI C.2.a, page VI 15.

It is felt that the work proposed in the Master Plan, for Reach 9, would not have an adverse effect on the neighboring communities and could be implemented independently. (J. Thomas Wood, Borough Engineers, Longport-Margate)

RESPONSE:

Thank you for supporting the proposed engineering plan for Reach 9.

228.
COMMENT:

Atlantic City also supports the priority non-structural reach program for Atlantic City as proposed in the Master Plan. We too feel that a comprehensive beachfill and subsequent beach nourishment program is the most attractive beach erosion program for this area. (Michael Ingram, Atlantic City, Engineering Department)

RESPONSE:

Thank you.

229.
COMMENT:

Little items like the per acre post storm price for Longport are obviously arbitrary —and wrong. It's hard to disagree with the overall plan for Absecon Island, but erosion and dune setback lines and buffers might easily be contested. (Robert Hughey, Robert E. Hughey Associates)

RESPONSE:

Comments are noted.

10. REACH 10 — PECK BEACH

230.
COMMENT:
On Draft Master Plan page V-45, a question for information purposes. Why is there such a large difference between the Cape May County county-level multiplier and the other two county-level multiplier? (Steve Gabriel, Department of Public Works, Ocean City, N.J.)

RESPONSE:
A county economic base multiplier is dependent on the size and diversity of the county economy. The more diverse and larger the economy, the higher the multiplier. As compared to Cape May County, the Ocean and Atlantic Counties' economies are larger and more diverse, including significant manufacturing, retail, and transportation components in addition to their resort industries.

231.
COMMENT:
On Draft Master Plan page V-19, in paragraph 5, calculating the recreational demand, it was assumed that the composition of beach users and mix of recreational services would remain constant over time. With the increasing attraction of the Atlantic City area as a year round place to live, resorts such as Ocean City, Atlantic City and Brigantine could easily experience a change in their beach user and recreational service composition. (Steve Gabriel, Department of Public Works, Ocean City)

RESPONSE:
Agreed. With the on-going changes in Atlantic City, recreational demand spillover and changes in the mix of beach user types are a real possibility. Recognizing the imprecise character of demand projections in general, the recreational development alternatives incorporate opportunities, at about 10-year intervals, to reevaluate and incorporate evolving recreational demand data.

232.
COMMENT:
Throughout Draft Master Plan Chapter V there is constant reference to conversion of residential properties to commercial and/or recreational facilities as seashore resort demand increases or as adaptations are made to changing market or shoreline conditions. On the contrary, the trend in Ocean City has been and is for conversions of commercial properties and some recreational facilities to residential properties. (Steve Gabriel, Department of Public Work, Ocean City)

RESPONSE:
Comment is noted. The actual trend in property conversion with demand growth within a particular reach would not significantly effect the Master Plan cost-benefit analysis.

233.
COMMENT:
On Draft Master Plan page V-90, in Table V.E-2, the present value cost of the Peck Beach engineering alternative for 50 years at 9% is set at $17.6 million. With the plan calling for periodic berm expansion at 10 year intervals ($2.8 million cost) and beach nourishment at 5 year intervals ($11 million cost), there appears to be a conflict. Would you please explain. (Steve Gabriel, Dept. of Public Works, Ocean City)

RESPONSE:
The engineering costs presented in the Master Plan are the present value costs for any particular alternative design. This present value cost can be related to an annual cost which is dependent on the period of time (years) and annual interest rate. However, this relation cannot be described by a simple linear function of interest rate and duration period. As discussed in Volume 2, Chapter VII for the Master Plan, this interest rate has been assumed to be 9%. This means that the annual return from a present day investment, if allowed to grow at the assumed annual interest rate, would suffice to cover the annual cost for a certain period of time. For Peck Beach, the present value cost for periodic berm expansion at 10-year intervals is approximately $2.8 million the annual cost is $0.82 million. This annual cost gives a total cost of $8.4 million (for a 30 year period from 1980 to 2010). The present value cost for beach nourishment at 5-year intervals is approximately $11.0 million. The annual cost is $0.99 million, and the total cost for a 50 year period is $49.7 million.

234.
COMMENT:
Regarding post-storm acquisition, why are you treating the issue of reimbursement or compensation separately in the Master Plan than you did in the Dune Act?
In the Act you have basically said that post-disaster homes, beyond the regulation line, if more than 50 percent destroyed will not be allowed to be rebuilt, period. However, in the plan you say that post-disaster land at the northern tip, for example, of Ocean City that is destroyed will be acquired by the State at a cost of $479,000 an acre, which is another side issue.
My question is, either, a) why are you bothering to compensate people for the north end of Ocean City at all or, b) if that is justified, then why doesn't the State say that they will compensate for all homes within the ocean regulation line? (Paul McCarthy, Ocean City Administrator)

RESPONSE:
Selective post-storm land acquisition is a very different approach than regulation of coastal high hazard areas. Under the proposed acquisition alternative, the DEP would consider purchase of storm devastated parcels with available funds on a case-by-case basis. Acquisition of large areas is not likely due to the limited availability of funding for that purpose.
As discussed in Volume 2, Section V.C.3, acquisition of the developed high hazard strip of land along the entire ocean front, which was the effected land under the proposed Dune and Shorefront Protection act, would not be feasible due to the significant social impacts and prohibitive cost of such an alternative. Likewise, purchase of entire barrier islands along the New Jersey coast is not viable.
In the case of the acquisition, the land is being transferred to public ownership. Under land regulation, ownership of the land is not transferred.

235.
COMMENT:

In regard to that replenishment concept of what is being proposed, Ocean City recognizes and accepts that there is, at least, a joint responsibility here in that the municipality in terms of its 50 percent obligation for initial projects recognizes that it should accept some of the burden. However, financial reality, I think, will force all of us down the line to reexamine the need for some kind of continuing outside funding in terms of the continuing project.

In Ocean City's case, for example, this is true of all the municipalities on the shore who have a $3 million investment initially and then five years down the line an $11 million investment. That $11 million investment five years later represents one whole year's operating budget for the municipality.

To assume that a municipality is going to be able to assume that total, even 50 percent, I think is being very optimistic and, perhaps, too optimistic. Also, it is a source of some concern where I feel the Federal Government is silent here. We believe they have a stake in the shore.

Further, in regard to the methods of financing, is the question of how do we legally justify the incurring of long-term indebtedness meaning the municipality 50 percent share for projects, which have been a publically stated uncertain life in some cases and in other cases have been an implicitly stated life of five years.

How does Ocean City get that million and a half dollars next year? Do we float a 20-year bond? If we do float a 20-year bond, how can we deal with it? My statement is how can you incur a long-term 20-year indebtedness for a project that may have only five years of life? (Paul McCarthy, Ocean City Administrator)

RESPONSE:

Comments are noted. Pending State legislation, which includes a provision for modification of the shore protection funding formula to a 75/25 State/local basis, should relieve the municipality funding difficulties to some degree. Also, if Federal participation is secured, the non-Federal share (State and local shares) would be reduced accordingly.

To cover the local cost share, bonding is one of the possible funding sources. It may in fact be difficult to incur long-term indebtedness for a shore protection project, such as beach fill, which has an inherently uncertain life span. However, local municipalities and lending agencies must realize that there will be substantial losses of private property and future recreational revenues if diminishing beaches are not restored and maintained against storms and long-term erosional effects. A beach sacrificed during a major storm is lost instead of the adjacent shorefront property and infrastructure. One needs only to recall the level of coastal damage incurred during the great storm of March 1962 to realize the significance of the protection afforded by a protection beach and dune system.

236.
COMMENT:

With regard to Corson Inlet, we believe that no activity at all should be funded here, including on the oceanfront. (Ruth Fischer, Citizens Association to Protect the Environment)

RESPONSE:

Comment is noted. Current DEP policy is to leave Corson Inlet in its natural status.

11. REACH 11 – LUDLAM ISLAND

237.
COMMENT:

The following comments are directed toward the alternative reach engineering concept and cost data contained in Draft Master Plan Appendix E for Reach 11 (Ludlam Island).

Alternative 1, Storm Erosion Protection, which in the Strathmere area consists of a 100 feet wide beach fill, will not in the opinion of the Township of Upper fulfill the objective outlined for the Storm Erosion Protection alternative in the Draft Master Plan in Chapter 5, page 17 (paragraph V.d.2c.(1). In the opinion of Upper Township the proposed Storm Erosion Protection alternative should be expanded to include the extension of the groin field from Strathmere to the existing groin field in Sea Isle City, together with the construction of a bulkhead from the terminus of the existing bulkhead in Strathmere at Sherman Road to the Sea Isle City boundary.

The Township of Upper has consistently expressed its willingness to participate in a program consistent with this alternative.

Alternative 2 for this Reach, Recreational Development, has the highest benefit to cost ratio of all the alternatives for the Ludlam Island Reach and ranks 7th overall on a benefit/cost ratio ranking for engineering alternatives as shown in Table V.A-1. This alternative proports to satisfy the recreational beach demand through the development of a recreational beach in Sea Isle City. Needless to say this is completely nonresponsive to the concept of recognition of differential beach qualities discussed above.

This alternative includes periodic beach nourishment with no initial beach fill as a means of maintaining the existing beach widths. Since the storm of approximately six weeks ago, and as will be graphically demonstrated in beach cross-sections recently taken of the Whale Beach Strathmere beaches by my office and shortly to be transmitted to your Office of Coastal Engineering, there is presently little, if any, beach in the Strathmere Whale Beach area south of Sherman Avenue and what has for many year represented an alternative quality beach resource has been destroyed. If this alternative plan is implemented, the result will be the loss of the Ocean Drive Highway, probably within less than two years.

Alternative 4, Limited Restoration, proposes a 100 foot wide berm in the Strathmere area which would taper to meet the existing berm along Whale Beach together with intermittent beach nourishment thereafter. As noted, the "existing berm, along Whale Beach" has largely been washed away. The adoption of this alternative, as in Alternative 2, would thus mean the destruction of the Ocean Drive Highway probably within less than 2 years together with the loss of a highly valuable public beach resource.

Alternative 5 which calls simply for maintenance of existing functional structures is likewise nonresponsive to the existing problem in the Reach and particularly to the problem in the south end of Strathmere/Whale Beach.

The Township of Upper requests you to, in recognition of our statements herein and the present severe situation in Strathmere and Sea Isle City along Commonwealth Avenue, take action as follows:

- *Authorize immediate action toward the construction of a timber bulkhead from the existing bulkhead termination point at Sherman Road in Strathmere to a point in Sea Isle City at which sufficient beach and dune remains between the ocean and Commonwealth Avenue so as to effectively remove the threat of the loss of Commonwealth Avenue with the next ocean storm.
- *Revise the Shore Protection Master Plan to reflect our comments in regard to the determination of cost benefit ratios, specifically with regard to beach quality, recognition, and impact of potential loss on essential community infrastructure.

(Michael Hyland, Upper Township Engineer)

RESPONSE:

We disagree that the alternatives outlined would not be satisfactory for the conditions for which they were designed. However, as DEP moves down the list of reaches to be worked on, site specific research and design work will be done before restoration begins. At the time of implementation, if DEP finds that the Plan overdesigns or underdesigns the alternative, the plan will be altered to the existing conditions or findings.

238.
COMMENT:

The cost benefit analysis, which is the basis of the priority ordering, appears to contain flaws in the case of Upper Township.

Statistics contained in Draft Master Plan Table A-1 "Socioeconomic Indicators" and Table A-2 "Land Use Indicators" with respect to Reach 11 include statistics which are applicable to the entire Township of Upper which, with the exception of the Strathmere Whale Beach area, is a rural residential community with characteristics as a whole quite different from the Strathmere Whale Beach section. Factors such as seasonal population ratio, percent population growth, area, population density, seasonal housing stock and equalized valuation per capita for Strathmere Whale Beach are substantially different than for the Township of Upper as a whole. There is certainly a greater property value density in Strathmere, for example, than exists for Upper Township as a whole given its largely undeveloped character.

The use of these statistics in developing such parameters as value of property protected by shore protection structures would appear to have the effect of undervaluing the affected properties.

With references to Figure V.B-3 "Procedures for Cost Benefit Analysis," more expansive treatments appear to be necessary in the determination of Elements C, D and K, Beach Related Recreational Benefits and Elements E, F and L, Property Protection Benefits.

The beaches in the south portion of Strathmere and the Whale Beach area are especially valuable due to their low intensity of use. The consistent evaluation of beach value, through the use of a 100 sq. ft. per user figure, is inappropriate as it fails to give recognition to the variation in quality associated with low population density and high population density beach areas. The users of the Whale Beach and Strathmere beaches are undoubtedly in part attracted to these beaches due to the substantial absence of nearby structures, the low user densities, and the natural and open atmosphere of the area.

This type of beach provides an alternative to the densely populated recreational beaches of more developed area such as Ocean City and downtown Sea Isle City and should be an option preserved through the State's Shore Protection Policies.

The Shore Protection Plan under its evaluation of property loss impacts has no mechanism for recognizing the extraordinary social and economic impacts that would be associated with the interruption or destruction of Commonwealth Avenue, the Ocean Drive Highway, and the primary access route from Sea Isle City to Ocean City.

Sea Isle City is closely tied to Ocean City both economically and culturally; the Ocean City shopping district is much utilized by residents of Sea Isle City and the Sea Isle City high school students attend Ocean City high school and are thus bussed to Ocean City daily via the Ocean Drive. The impacts of the loss of the Ocean Drive Highway would be devastating. The cost benefit analysis in its present form fails to give any consideration to this aspect of Reach 11's shore protection problems. (Michael Hyland, Upper Township Engineer)

RESPONSE:

The cited socioeconomic indicators and land use indicators were presented in the Draft Master Plan for the purpose of assessing the socioeconomic impacts related to the alternatives evaluated. These statistics were not used in developing property protection or recreational benefits which were key to the benefit/cost analysis. Property values for the State shorefront areas were developed based on a survey of shore real estate agencies. Recreational benefits were developed using a methodolgy whereby a unit value was accrued for each additional beach user accommodated under a particular plan. Although the unit value can be varied to reflect variations in beach quality, it can be argued that a beach area supported by adequate facilities and parking is a more valuable recreational commodity than an isolated low user density area. In fact the methodology recommended by the Federal government assigns a higher value to areas with supportive facilities and services.

The potential for loss of vulnerable segments of Ocean Drive Highway has been accounted for in the assessment of property protection benefits in the cost-benefit analysis. As you have noted, the analysis does not incorporate nonquantifiable secondary social and economic impacts that would be associated with total interruption of the highway. However, it should be noted that similar nonquantifable erosion impacts can be applied to most of the States' vulnerable lowlying coastal areas. Thus, Ludlam Island is not unique in this regard.

A generic discussion of nonquantifiable social and economic impacts of the various alternatives, including the no action alternative, is provided in Volume 2, Chapter V.

239.
COMMENT:

I recommend that the State provide for a positive program that includes beach nourishment and the construction of jettys and groins as we have done in the past, so that tidal land can be reclaimed, and stabilized and would create a natural buffer from storm surges minimizing erosion. If the State DEP followed through with its original promise to construct groins in Sea Isle City the sand would still be on the beaches and we would not be faced with the potential for disaster that we face this very minute if another storm or hurricane moves up the coast.

The State DEP and the federal Army Corps have repeatedly identified the Townsends Inlet section of Sea Isle City as a high risk beach erosion area. Pumping more sand on the beaches will be a help, temporarily. In my opinion, we in Sea Isle City are a unique situation that deserves consideration for funding the construction of stabilization devices, in order that we solve our erosion problem permanently. (Mary Macfarlane, Sea Isle City; Honorable Andrew T. Bednarek, Commissioner, Sea Isle City)

RESPONSE:

Comments are noted. However, the DEP does not agree that Sea Isle City is a unique situation with regard to erosion problems. The problem is critical at many locations and available funds are and have been inadequate to control the situation on a statewide basis. For this reason the DEP commissioned the consultant to develop a priority list of reach engineering project. We believe the recommended Shore Protection alternative for Sea Isle City, if cost beneficial and implemented, would be sufficient to protect the area. We hasten to add that beach erosion problems can never be solved "permanently," give the lack of funds and natural process. Because of its natural configuration and location, Ludlam Island has always been a low island with a deficit of sand in its system. Because groins only work well when there is a sufficient sand in the system to trap, groins built in a low sediment budget area are relatively ineffective and give the public a false sense of security that the land behind them is therefore "protected."

240.
COMMENT:
We feel the plan should readdress some of the Cape May County locations. Sea Isle City is not addressed in terms of improvements. I don't know if that is an omission, whether is was purposeful or not. (Elwood Jarmer, Planning Director, Cape May County)

RESPONSE:
The Draft Shore Protection Master Plan provided alternative engineering plans for all Cape May County reaches. Five alternative plans were evaluated for Ludlam Island which includes Strathmere and Sea Isle City. At a minimum, the plan provides for maintenance of existing functional shore protection structures on a case-by-case basis as justified.

241.
COMMENT:
The area between 32nd and 57th Street is eroded. However, groin fields in that area have stabilized the beach and we feel have worked very well. (Andrew Previti, Municipal Engineer, Sea Isle City)

RESPONSE:
Comment is noted.

242.
COMMENT:
The third point concerns the benefits to cost ratio, an acceptable method of placing projects on a priority basis. We feel that there are some problems in relation to Sea Isle City. The Strathmere portion of the Ludlam Island reach, which is made of Strathmere and Sea Isle City, is relatively undeveloped in relation to Sea Isle City. The property benefits are low in relation to Sea Isle City. We feel this may have an adverse effect on the benefit cost ratio for the entire lower island beach. (Andrew Previti, Municipal Engineer, Sea Isle City)

RESPONSE:
Thank you for supporting our approach to the priority analysis. You have, in fact, recognized one aspect of the analysis that results from grouping municipalities into "reaches" for the purpose of designing engineering programs. That is, the benefit/cost ratio derived for an entire reach may be higher (or lower) than the ratio derived from analysis of the individual component municipalities. The same could hold true of local, less-than-municipality projects. However, the alternatives provided in the Master Plan are proposed as "reach level" alternatives which should be implemented in their entirely. Less-than-reach engineering projects are allowed under the Master Plan Program only where they are found to be consistent with respective reach plans, will not result in adverse physical or environmental impacts, and can be demonstrated to be economically justifiable in a case-by-case evaluation.

Regarding the effect of combining Sea Isle City with Upper Township (Strathmere and Whale Beach) in the reach benefit/cost analysis, the various components of the analysis have been broken down by the component municipalities and are presented in the table below for the Storm Erosion Protection Alternative.

BENEFIT/COST ANALYSIS FOR REACH 11 - LUDLAM ISLAND
SUMMARY OF COMPONENT PROJECT COSTS AND BENEFITS BY MUNICIPALITIES
STORM EROSION PROTECTION ALTERNATIVE
(All Estimates are in Millions of Dollars)

Item	Estimated Present Worth Value		
	Sea Isle City	Upper Township	Ludlam Island
Engineering Cost	31.017	11.392	42.409
Public Service Cost	7.555	0.905	8.460
Recreational Benefit	15.110	1.811	16.921
Property Protection Benefit	6.974	1.467	8.584
Benefit/Cost Ratio	0.57	0.27	0.50

As illustrated in the summary table, the benefit/cost ratio for Sea Isle City alone is slightly higher than the reach wide ratio. However, the ratio for Upper Township is significantly lower. In either case, the analysis indicates the storm erosion protection alternative is clearly not cost-beneficial, whether evaluated on a reach-wide or municipality level.

12. REACH 12 – SEVEN MILE BEACH

243.
COMMENT:
On page VI-40 of the Draft Master Plan, the berm widths should be presented for the Seven Mile Beach reach plan. (D.J. Sheridan, Dept. of the Army, Corps of Engineers, Philadelphia District)

RESPONSE:
In the Volume 2, Chapter II, the discussions of recommended plans for each reach have been expanded to include design beach and berm width information. For Seven Mile Beach, the Recreational Development Plan design beach widths range from 160 feet initially to 240 feet in the year 2030. The final design berm width is 60 feet at elevation +10 feet MLW.

244.
COMMENT:
With regard to Hereford and Stone Harbor Point, that's another area that we believe that should be forgotten (left in their natural state). (Ruth Fischer, Citizens Association to Protect the Environment)

RESPONSE:
The DEP agrees that these areas should be left as natural as possible.

245.
COMMENT:
At Stone Harbor, we recommend the preservation of the Point, south of 123rd St., in its undeveloped state and modification of the terminal groin to allow sand bypassing, as well as the elimination of the seawall which has aggravated erosion conditions. (Paul Dritsas, American Littoral Society, Sandy Hook, N.J.)

RESPONSE:
The DEP agrees that Stone Harbor Point should be preserved in its natural state. That has now been largely accomplished with settlement of the appeal of a CAFRA permit descision. The Borough of Stone Harbor and the Bureau of Coastal Engineering are now designing some mitigating measures that, when built, are expected to slow the erosion now caused by the existing shore protection structures (bulkhead and groin at 127th Street and bulkhead return) built in the late 1960's.

246.
COMMENT:
We are supporting keeping Townsends open since there are commercial vessels using that so often. (Ruth Fisher, Citizens Association to Protect the Environment)

RESPONSE:
Navigational considerations are outside of the scope of the Shore Protection Master Plan.

247.
COMMENTS:
Local regulations and development plans that have been implemented by the Borough of Avalon are sufficient for this community and there is no need for further State regulation. (Phillip Judyski, Borough of Avalon)

RESPONSE:
Comment is noted.

248.
COMMENT:
The Dames & Moore report approaches the beach replenishment program with a very sketchy designation of going down to the southern limits of Stone Harbor, which indicates on the plan about 117th Street. I would like a clarification of that designation as it appears on the recreational program. (Mayor James G. Wood, Stone Harbor)

RESPONSE:
The Recreational Development Plan for Reach 12 - Seven Mile Beach, calls for nourishment of beaches and periodic expansion of beaches along the oceanfront as far south as the existing terminal structures at 127th Street. No beach filling is proposed for the undeveloped southern end of the reach. The beaches in this area would be maintained (nourished) via the southerly transport of sand from nourished beaches north of the terminal structures.

When DEP embarks on Phase II of the program (the Individual Reach Design Phase), the limits of the beach replenishment program will be specified in detail before pumping begins. Because DEP expects southerly drift in that particular area, sand will be transported and redistributed by waves and currents further south than where it is actually placed.

13. REACH 13 — FIVE MILE BEACH

249.
COMMENT:
I'm a bit lost to find out where you're going to put a 100-foot berm down a beach of Wildwood Crest. I am also interested if you are going to buy back approximated $150 million worth of ratables when the storm comes in. With whose money? I personally don't understand any statements, any conjecture that a barrier island must be a barren island. (Mayor Charles Guhr, Wildwood Crest)

RESPONSE:
In accordance with design criteria utilized for all of the ocean front reaches, the storm erosion protection alternative evaluated for Reach 13 (Five Mile Beach) would provide for widening of the beach berm to 100 feet at elevation +10 mean low water, where it doesn't already exist, from North Wildwood to Wildwood Crest. This would primarily involve raising the berm elevation of areas which presently have fairly wide beach widths. However, none of the reach-level engineering alternative were found to be economically justifiable in Reach 13. Therefore, no berm expansion is recommended for Wildwood Crest. Also the plan states that no specific areas are recommended for designation as pre- or post-storm acquisition.

250.
COMMENT:
North Wildwood and Hereford Inlet is a problem area. What are we going to do here? If you propose nothing, perhaps you should explicity state that. (Elwood Jarmer, Planning Director, Cape May County)

RESPONSE:
No erosion control projects are specifically proposed in the plan for Hereford Inlet. However, local projects are conditionally acceptable under the plan if they can be shown to be cost effective in a case-by-case evaluation. Negotiations are underway between North Wildwood and the Bureau of Coastal Engineering to complete the erosion control project, including a seawall, that has been underway on the inlet shore since the early 1970's.

14. REACH 14 — CAPE MAY INLET TO CAPE MAY POINT

251.
COMMENT:
With regard to Cape May and to the Cold Spring Harbor Inlet question, we don't fully support the plan nor your endorsement of it. We believe that a bypass system should start immediately. Any further structures in Cape May in this area, in addition to those drawings, should be halted until that bypass system begins. (Ruth Fisher, Citizens Association to Protect the Environment)

RESPONSE:
Comment is noted.

252.
COMMENT:
Cape May Point is discussed briefly, but there is no mention of the kind of preservation of the structures that are there and whether there will be some preservation there. (Elwood Jarmer, Planning Director, Cape May County)

RESPONSE:
The Master Plan recommends a program of maintenance of shore protection structures on an as needed basis. Maintenance of groins and the seawall is proposed. However, no major rebuilding or extension of these structures is intended.

15. REACH 15 — DELAWARE BAY

253.
COMMENTS:
The Delaware Bay Shore needs to be seriously addressed by the plan. (Elwood Jarmer, Planning Director, Cape May County)

It seems to me that what you are saying there is if the federal government decides to adopt those test sites or test areas along there, that you will embrace that as part of your plan. But what if that federal program does not come to fruition? What are you going to do to that part of the coastline, because, after all, in the October 25th (1980) storm, it was the most devastated area of the entire coast. (Assemblyman James Hurley, District 1)

In response to its negative aspects, I strongly urge that any master plan restoring storm battered coastal communities include the devastated Delaware Bay shore area hit by the October 25, 1980 storm. (Assemblyman James R. Hurley, District 1)

RESPONSE:
The Master Plan does not propose the restoration of storm battered communities along the Delaware Bay shore. It recommends implementation of low cost shore protection measures and acquisition of damage prone areas. These areas would be kept in a natural state so as to minimize future property losses to storm damage which would occur if the areas were rebuilt.

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CHAPTER IV

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